THE OIL WEEKLY

NOVEMBER, 6, 1939

VOLUME 95 NUMBER 9

The Week's Panorama

IT is believed that the Federal Reserve Board index of industrial production for October will be above 115 percent of the 1923-1925 average, compared with 110 in September. Since 1929 the index has been above 115 only in December, 1936, and in February, March, April, May, and August, 1937. The index was at 125 when it reached its all-time peak in 1929, and the nearest it has approached that peak subsequently was when it rose to 121 in December, 1936.

Crude Stocks Lowered . . . .

The dropping of crude oil stocks further to a new 17½ year low of 229,127,000 barrels in the week ended October 21 reflected the all-time record refinery runs of that week. If runs to stills had been more moderate, sufficient crude would have been available from current production, without dipping into crude storage. Apparently, there is not so much an under-producing of crude as an over-refining.

Texas Oil Wanted . . . . . .

The appearance of two Texas Railroad Commissioners before the Bureau of Mines last week, seeking an increased estimate of demand for Texas crude in November, apparently is an aftermath of the Mid-Continent shutdowns, despite emphasis placed by the commissioners on export demand. Actually, some refiners, both major and independent, are not able to obtain all the Texas crude they would buy, particularly as regards certain grades, such as those suitable for making aviation gasoline. Some Texas Gulf Coast refiners are obliged, against their preferences, to operate on Louisiana crude. Certain independents say they cannot solve their problem by purchasing from major companies because the latter also are short of certain grades. Apparently, the heavy draft on crude stocks during the latter half of August left inventories of certain grades in Texas sub-normal, especially for some companies, and until such stocks are brought back up to normal, a tightness of the market will prevail.

Oil Shipping Rates . . . . . .

Interstate Commerce Commission examiners at Chicago on November 15 will resume hearings that were started in Dallas recently on application of refiners for lower freight rates on oil products from the Mid-Continent to northern points. Certain witnesses at Dallas contended that lower rates would help put some railroads on a profitable basis; that lower rates were needed by independent refiners-marketers to enable them to compete with larger concerns having the advantage of their own pipe lines.

NLRB Order Attacked . . . .

In petitioning the United States Fifth Circuit Court of Appeals at New Orleans to set aside a National Labor Relations Board order, Humble Oil & Refining Company last week contended that the board's findings of fact were contrary to evidence presented before the board's trial examiner.

Rockefeller Interests . . . . .

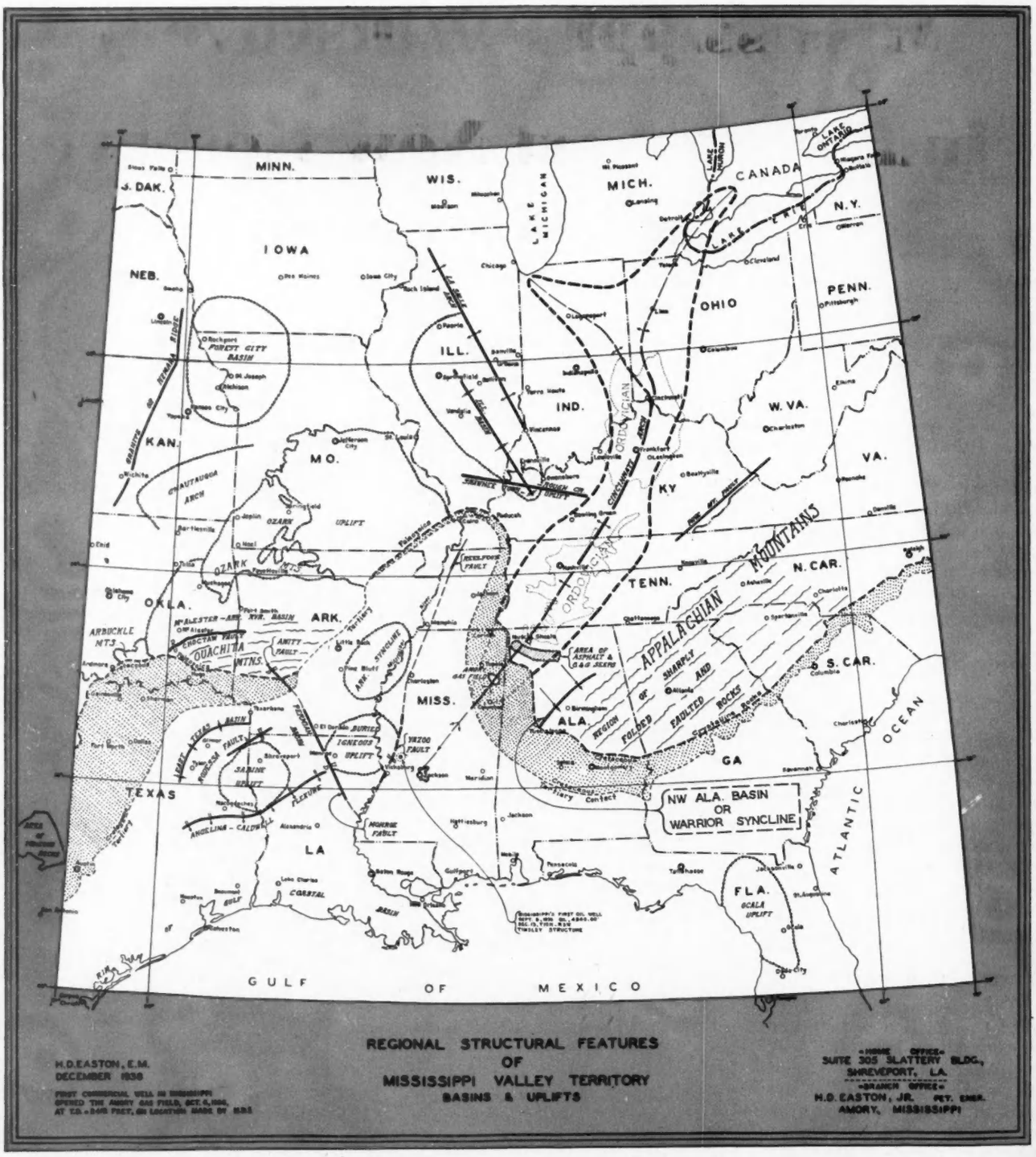
Information on oil company stockholders submitted to the Temporary National Economic Committee revealed that the Rockefeller family was still largely interested in the oil industry. At the end of last year, John D. Rockefeller, Jr., was the largest stockholder in Socony-Vacuum Oil Company, Inc., and in The Ohio Oil Company and was the second largest stockholder in Standard Oil Company (New Jersey), ranking after Standard Oil Company (Indiana) in the New Jersey ownership. His stock in those companies at present market prices is equivalent to about $117,000,000. His holdings plus those embodied in trusts for members of the family and in the Rockefeller benevolent institutions are spread well over the industry, being not only in the Standard group but also in independent companies, such as Consolidated Oil Corporation and Continental Oil Company.

Cole Oil Bill . . . . . .

Open hearings on the Cole bill are scheduled at Washington beginning November 6. The Cole committee later will hold hearings in Texas, Louisiana, and Illinois. To be heard at Washington are Secretary of Interior Harold L. Ickes, whose department drafted the bill; representatives of the War and Navy departments; and representatives of the National Resources Board. The oil subcommittee of the House interstate commerce committee, headed by Wm. P. Cole (Dem., Md.), is composed of the same members as in a similar 1934-1935 investigation, with one exception. The group at that time advised against federal control other than the Interstate Oil Compact and the Connally Act.

Wage-Hour Law . . . . . .

Employes of Halliburton Oil Well Cementing Company at Duncan, Oklahoma, last week brought up an interesting proposal, in asking their congressional delegation to seek amendment of the federal wage-hour law to permit employe groups to waive the regulations if they wish. The group asserted that they were paid well over the minimums set in the law but that their weekly earnings were reduced 4 to 7 percent when the changes went into effect recently, reducing hours without overtime pay from 44 to 42 a week. This situation was foreseen in Congress, but it was contended that companies could avoid overtime pay by employing additional workers. The above workers said they were willing to work overtime at regular pay.



Oil's Newest Domain

A new frontier has been opened for oil development. Mississippi has become the 22nd state in the United States to produce commercial oil. Naturally, the discovery of the first production in any state would be of major importance, but in this instance it promises to be of even more than usual significance. Already, an intensive leasing campaign has spread not only through Mississippi but further eastward into Alabama. Some are predicting the play will eventually sweep the entire coastal area as far as the Atlantic Ocean.

The accompanying article is the first of a number of articles on Mississippi to be published in THE OIL WEEKLY. These will answer many of the questions that have arisen as a result of the discovery of this new frontier. A wealth of historical and geological background, data on drilling conditions, discussions of the possibilities of the region, several maps, and descriptions of the present play are to be covered in a comprehensive fashion.

Mississippi Oil Discovery Indicates Vast New Reserve

By H. D. EASTON, M.E.

State offers possibilities for production in three distinct and separate provinces

ON September 5, 1939, Union Producing Company completed Woodruff 1, Section 13-10-3w, Yazoo County, as the first commercial oil well in Mississippi, and initiated an oil boom that is spoken of as "The Last Oil Frontier." This discovery production is coming from a quartz sand beneath the Selma Chalk of Upper Cretaceous age, at a depth of 4560 feet. Two other wells have been completed from this same horizon, one a quarter of a mile south, and the other five-eighths of a mile northeast.

Moreover, oil production has been established in a deeper horizon in a well of Union Producing Company located a half mile north of the discovery. This north well encountered faulting, missed the original pay, drilled ahead and found commercial oil (as shown by a drill stem test, coring and electric log) in a sand at the Eutaw-Tuscaloosa contact and is prospecting ahead to determine still deeper conditions.

An oil boom has resulted, but unlike most oil booms brought on by the unexpected discovery of oil in some remote area, there had been a steady progressive movement carried on throughout the past two and more years by substantial operators. Hence the discovery of oil on the Tinsley Structure, south of Yazoo City, was not a surprise affair, but merely an accelerator which increased an intelligent program into the rapid pace of an oil boom.

Three Geological Provinces

Three separate and distinct oil provinces are present in the state:

1. The southern one-third of Mississippi (together with adjacent portions of Southwest Alabama) offers production possibilities under drilling and operating conditions similar to those of South Louisiana. This south portion of Mississippi has received prolonged attention by major firms, has been given thorough geophysical prospecting, has witnessed the discovery of one salt dome (Midway Dome, Lamar County) and now has some 6,000,000 acres under long-term leases on approximately 50 geophysical prospects.

There is no boom activity in sight for this southern part of the state, because it is largely in the hands of major operators and will be handled in an orderly manner.

2. The central and northern portions of Mississippi: say, the northern two-thirds of the state. Starting from the oil discovery on the Tinsley Structure, in Yazoo County, and extending northward along the margin of the Yazoo Delta, and southeastward to the Alabama line.

Great activity is radiating outward from the Yazoo discovery. The present play includes many counties which had not been leased, and there is something of a scramble for structures and blocks of leases.

Within this second province, new geological information was obtained prior to the discovery of oil. The presence of the Lower Cretaceous (between Vicksburg and Jackson) had been established, and a second salt dome (near Edwards, about 18 miles east of Vicksburg) implies the presence of Permian limes.

It is my purpose to give an impression of regional conditions within this second province.

3. The Amory District of Northeastern Mississippi, together with those counties of Northwest Alabama lying north and west of the low part of the Warrior Coal Basin, are grouped together as the Northwest Alabama Basin. This is a province within which production will come from the Paleozoics, and in its major aspects will have drilling and operating conditions similar to those of the Illinois Basin. This province is receiving much attention from both majors and independents.

Regional Conditions

Because of the discovery of commercial production in the above-mentioned second province, an impression of its regional conditions is of interest.

The accompanying sketch (page 14) is designed to point out some of the known and probable economic features in connection with the regional geology of Central and Northern Mississippi.

In an ancient issue of THE OIL WEEKLY ("Is Mississippi To Be an Oil State," October 29, 1921, by H. D. Easton), a sketch showed the probable presence of Lower Cre-

taceous beds overlapped by members of the Upper Cretaceous and not present on the outcrops in the northeastern part of the state. It is now known that Lower Cretaceous beds are present in the area between Vicksburg and Jackson, and it is probably true they were found in a well drilled to 4260 feet in Montgomery County, about 70 miles north-northeast of the Tinsley (Yazoo) oil field. Deeper drilling now being done in the Yazoo field may shortly establish the facts concerning the presence of Lower Cretaceous on the Tinsley Structure.

Probable Horizons

It seems probable that production will be had from Lower Cretaceous beds in connection with local structures, as is the case in northwestern Louisiana. It may also be expected that production will be found under shoreline conditions, along the northeastern limit of these Lower Cretaceous beds where the overlap of Upper Cretaceous would serve as a cap.

The Edwards salt dome implies the presence of the "Big Lime." It is a safe assertion that this salt is of Permian age, that there is a layer of Permian rock salt present and that the Permian will also offer production in its "Big Lime" on local structures.

Also, the northeast edge of any "Big Lime" which may be present would offer production in a shoreline trap. In this connection it should be observed that, during the time the Permian and other Paleozoics were on the surface, the layer of rock salt would have gone into solution quite some distance downdip and this would have allowed the truncated edge of the "Big Lime" to sag downward thus presenting a larger area of "Big Lime" for shoreline production.

Beneath the Permian, the Pennsylvanian beds also present possible production in their truncated edges, since the Permian and the other Paleozoics are standing at a much steeper angle than the overlying beds of Cretaceous. In other words, Paleozoic production might be found in shoreline traps without the drilling bit penetrating any appreciable distance into the Paleozoics.

As is the case in the Gulf Coastal Region, production in porous beds adjacent to a salt plug, where their edges have been turned steeply upward, might be found. This could be true surrounding the Edwards salt dome, or other salt domes which may be discovered later.

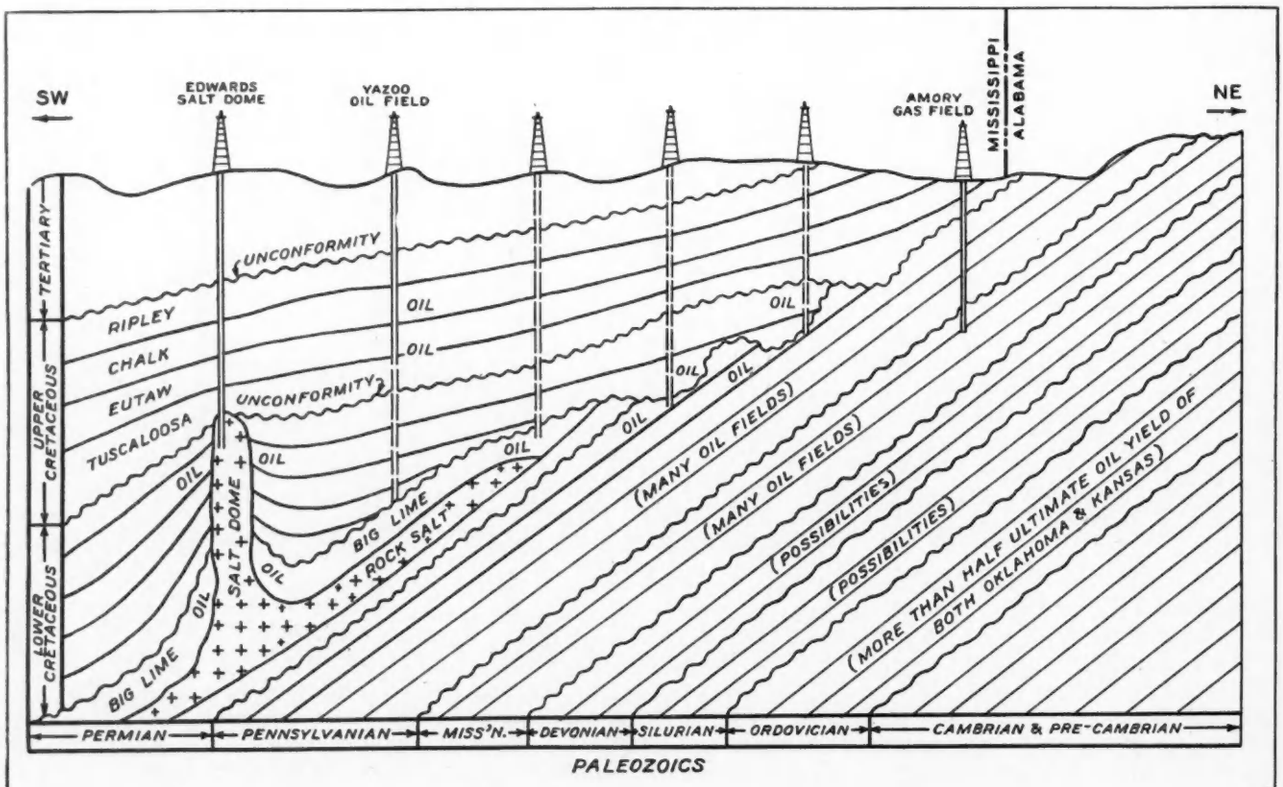
Summation

Much of the north two-thirds of Mississippi offers possibilities of production in the Upper Cretaceous in connection with local structures, as is the case near Yazoo City.

In addition, there are Lower Cretaceous and Permian possibilities under ordinary structural conditions.

For prospecting in the underlying beds, there are stratigraphic traps consisting of steeply inclined edges around salt domes, shorelines and truncated edges.

It is very likely that Mississippi will yield many oil pools.



SKETCH— No Scale —Exaggerated Dips—
Showing Stratigraphic Traps, Shorelines, Truncated Edges Etc. Also showing Lower Cretaceous and Big Lime Possibilities in Central Mississippi.

H.D.Easton E.M.-October 1939.

Indiana Hits Comeback Trail With New Wildcat Campaign

By Z. H. MISCHKA, Staff Writer

SPURRED on by the highly successful development campaign currently being conducted in adjoining Illinois, Indiana is experiencing a wildcatting program which, while not as intensive, has thus far proven quite successful.

The Indiana wildcat campaign, slower to get started than that in Illinois, probably will never approach that which has marked its western neighbor's development in the past three years. Significant, however, is the success marking efforts of Indiana operators in their quest for new fields, the rising daily production and growth in drilling activity.

Three strikes were made by Indiana operators in the drilling of 40 wildcats during 1938, representing a percentage of 7.5 successful tests. Illinois operators, in the same period, drilled 419 wildcats to open 18 new pools, or a percentage of 4.3. The trend continues this year. Eight Indiana fields were opened during the first nine months, during which period 78 wildcats were completed, a successful completion percentage of 10.3. During the first eight months of this year, Illinois operators drilled 334 wildcats to open 19 fields, 5.7 percent of the wildcat completions proving successful.

One exceptional and three good fields have resulted from recent Indiana wildcat activity. Two of the remaining eight fields were abandoned when additional drilling was not successful and two others appear to be of little importance. The other four, all very recent discoveries, await additional development.

Sixteen Indiana counties saw wildcat activity in 1937, and 10 of these and 6 additional counties figured in the play a year later. The campaign has spread to new areas during 1939. In the first nine months of current year, wildcats have been completed in 23 different counties.

One of 31 wildcats drilled in 1937 was successful. A year later, three strikes were recorded in 40 wildcats drilled. The first nine months of this year saw eight strikes in 78 wildcats completed. The three 1938 pool openers were in two counties, while five counties are represented in the strikes made thus far this year.

Forty-eight wildcats, scattered in 27 counties, are currently drilling.

A conservative estimate on Indiana land leased for oil and gas prospecting is between 4½ and 5 million acres, much of which is checker-boarded.

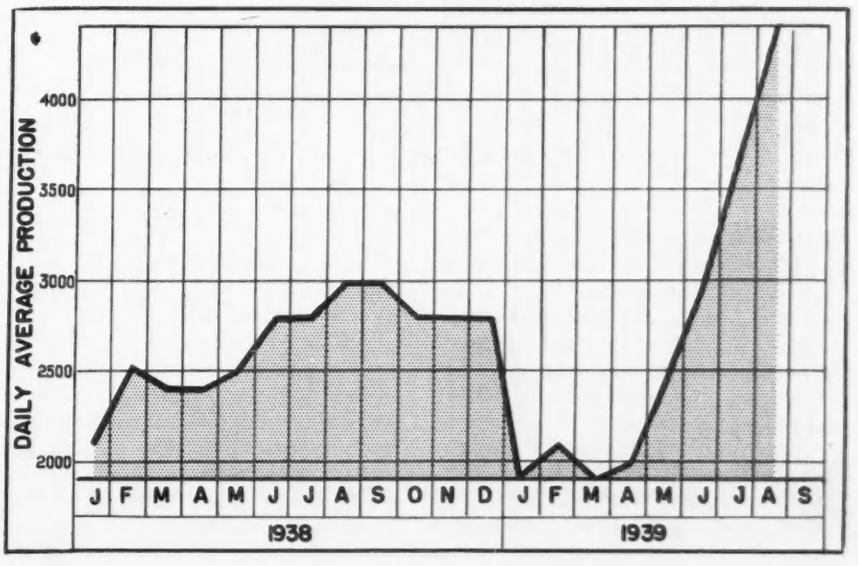
The number of rigs in operation in Indiana fields has almost doubled since the Prairie Creek discovery late in 1937 started active development in the territory. The rise from 36 rigs in January, 1938, to 65 rigs in September, 1939, is indicative of the general revival of interest in Indiana possibilities.

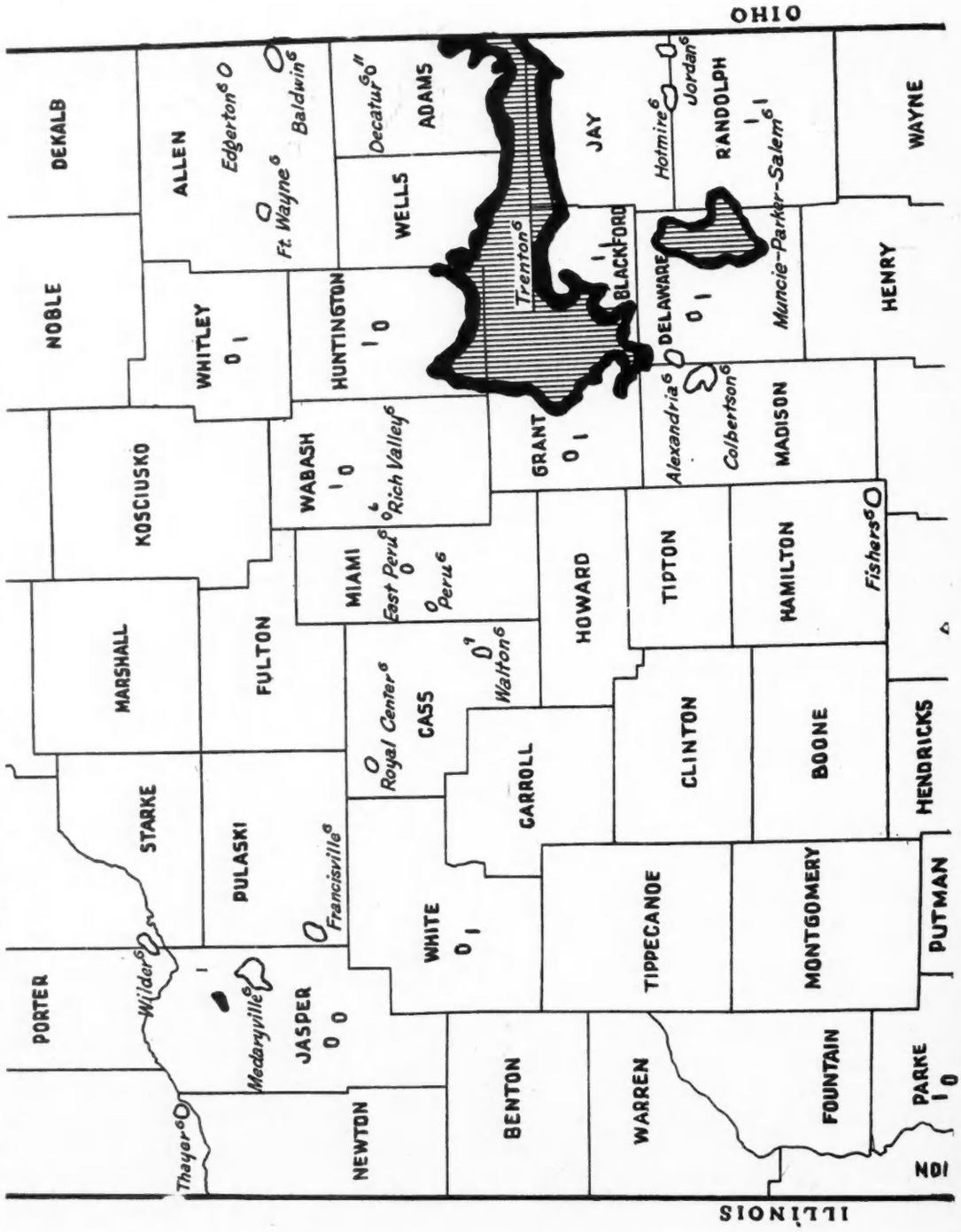
During the first nine months of 1939 as many wells have been completed in the state as during the 12 months of 1939. There have been 163 completions this year compared with 162 during all of 1938, and 146 in 1937. Wells are being completed at a rate of 70.5 percent greater than last year.

Success of Indiana activity in the past six months is exemplified by the sharp rise in daily production from 1900 barrels in March to 4400 barrels in August of this year. Production for the year, if the present rate is maintained, will exceed the state's post-war record of 1921, when 1,158,000 barrels were produced. The state recovered 964,000 barrels in 1938.

While most of the current drilling activity, as well as wildcat activity of the past three years, has been in the Indiana portion of the

Indiana daily average production gained 230 percent in the five months ended August 31, 1939; climbing from 1900 barrels to 4400 barrels.





Old and new Indiana fields, including areas abandoned and partially abandoned, are shown on the accompanying map. New pools opened since January 1, 1937, are printed in blue color. The age of the horizon from which each field is producing, or has produced, is indicated by the small black numeral following the pool name, and is explained in the accompanying "Age Key."

Geographical and numerical distribution of Indiana wildcats drilled since January 1, 1937, are shown by the two blue numbers appearing in the various counties. The first number indicates the number of wildcat failures completed, while the wildcat tests now drilling are shown by the second figure.

Map prepared from Indiana Department of Conservation records.

Illinois Coal Basin, other sections have not been neglected. There is increasing interest in the old Trenton area, in the central-eastern section of the state, while the northern tiers of counties have been subjected to considerable leasing in the past few months.

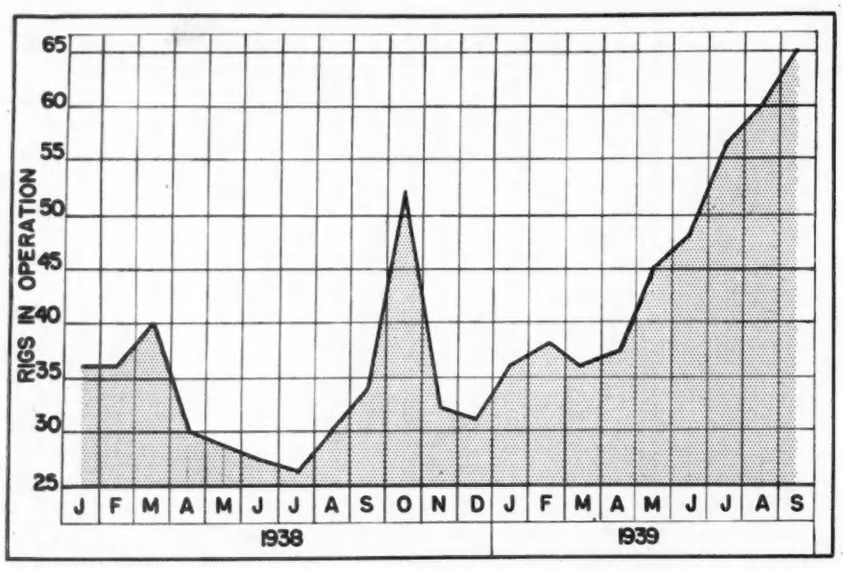
The goal of operators in the Trenton area, where wells have been producing for more than 30 years from the first pay streak in the lime at depths ranging from 950 to 1050 feet, is the second and third pay streaks, approximately 200 feet lower, and the underlying St. Peter sandstone.

As yet the extreme northern counties of the state have seen little drilling, although one as yet unnamed producing area was opened less than two months ago in Jasper County, the northwestern part of the state. The discovery, United Development Company's Oscar & Melvina Woodruff 1, 270 feet from the south line and 900 feet from the east line, SE SW 28-31n-5w, initialed 10 barrels a day from the Trenton with bottom at 1011 feet. As yet the area has not been confirmed.

The Indiana discovery wells during the past two years have had an average depth of 1832 feet and an average initial yield of 137 barrels. So far a total of 2560 acres have been proven productive in

[*Continued on page 18*]

VERMILL
1 0
VIGO
6-0
Terre Haute⁴
0
Riley⁴ 0
Prairie Creek⁴⁻⁵
Siosi⁴⁻⁵
CLAY
2 1
OWEN
1 1
MORGAN
JOHNSTON
1 0
SHELBY
Broad Ripple⁵
MARION
1 2
HANCOCK
RUSH
FAYETTE
UNION
FRANKLIN
DECATUR
SULLIVAN
11-3
Dodds Bridge¹
Shelburn¹
Denny¹
Sullivan¹
Merom-Raley¹
Edwards¹
GREENE
2 0
MONROE
2 0
BROWN
BARTHOLOMEW
DEARBORN
RIPLEY
JENNINGS
JACKSON
Heltonville⁶
0
LAWRENCE
OHIO
SWITZERLAND
JEFFERSON
KNOX
9 5
DAVIESS
9 1
MARTIN
7 2
Bicknell²
Monroe City²
Cannelburg²
Loogootee
Veale²
Decker²
Bowman²
Alford²
Petersburg²
Union²
Wheeling²
Oatesville²
West Princeton
East Francisco
1-2
Oakland City²
West Francisco²
Griffin
1-3-4
Somerville
1-2
PIKE
4-2
DUBOIS
4 1
Birdseye²
Mackey¹
ORANGE
2 0
WASHINGTON
SCOTT
CLARK
FLOYD
CRAWFORD
0 2
HARRISON
4 1
GIBSON
14-6
WARRICK
6-2
VANDER-BORGH
11 0
New Harmony²
St. Wendells
Chandler²
Vanderburgh
Santa Claus²
Gentryville²
Bristow²
PERRY
12 1
POSEY
9 3
Vienna¹
Huesler
SPENCER
11-4
Rock Hill²
Troy²
Rockport²
Point²
KENTUCKY
LEGEND
O - ABANDONED FIELD
PARTIALLY ABANDONED FIELD
PRODUCING FIELD
BLUE INDICATES FIELD DISCOVERED SINCE JAN. 1, 1937
ABANDONED FIELD
PARTIALLY ABANDONED FIELD
PRODUCING FIELD
AGE KEY
1—Lower Pennsylvania.
2—Chester.
3—New Albany (Upper Devonian).
4—Corniferous (Upper Devonian).
5—Niagaran (Silurian).
6—Trenton (Ordovician).



Indiana rigs in operation have almost doubled in the last 21 months; rising from 36 rigs in January, 1938, to 65 in September, 1939. Recent months have shown a steadily increasing volume.

the new campaign, which has resulted in the completion of 109 wells.

The year 1937, which marked the opening of the first pool in the new Illinois development program, saw the discovery of a single new Indiana oil field—the Prairie Creek in Vigo County. Production is from the Niagaran lime, at an average depth of 2150 feet, and 19 oil wells and one dry hole have been drilled in development of this area. The field is on a dome structure. Approximately 400 acres have been proven productive. Thirty wildcats drilled in 1937 were dry holes.

Two of the three 1938 discoveries are well rated, while a third producing area has been abandoned after three dry holes were drilled in an effort to confirm the area.

Griffin Field Outstanding

By far Indiana's most important discovery in the current development program is the Griffin field in Gibson County. The discovery test was completed in the McClosky lime at the very close of last year for an estimated initial production of 1000 barrels a day. Fifty-one oil wells and 5 dry holes have since been drilled in developing the Indiana side of this pool, now extending south into Posey County, with many more wells in Wabash County on the Illinois side of the Wabash River. Besides the McClosky, production is now being taken from the Cypress, Tar Springs, Waltersburg and Aux Vases formations.

One of the eight discoveries of 1939 has already proven its worth. Nine oil wells and one dry hole have been drilled in the New Harmony pool of Posey County, and 160 acres have been proven productive. Production is from the McClosky lime and Waltersburg sand. Twenty operations were active in the pool, and development has extended across the Wabash River into White County, Illinois.

The Rockport pool, with two oil wells and three tests drilling, ranks second among 1939 discoveries. Eighty acres have been proven productive from the Palestine.

One new 1939 oil area has been abandoned without a confirmation test having been drilled. It was the Posey County area opened by Clint Crosby, which was a McClosky lime completion on May 20 with an initial production of 75 barrels. Production rapidly declined.

The six remaining 1939 discoveries have not been confirmed, and their valuation must await additional drilling.

Discoveries in Indiana During Past Two Years

POOL	COUNTY	DISCOVERY WELL	Date	Producing Horizon	Initial Production	Total Depth (Feet)	Productive Acres	COMPLETED WELLS		PRESENT STATUS	
								Oil	Dry	Drilling	Rigs
		1939 DISCOVERIES									
Rockport Oil	Spencer	F. L. Damron's Cora Niles 1, NW NE 2-8s-7w	5- 3	Palestine	20	1412	80	2	..	3	..
No name	Posey	Clint Crosby's Pauline Scherer 1, NW SW 13-7s-13w	5-20	McClosky	75	2720	None*	1	..	..	..
Chandler	Warrick	McWilliams & Schwartz', Jas. S Brammer 1, NE NE 14-5s-9w	5-24	McClosky	70	1960	20	1	..	1	..
New Harmony	Posey	Superior Oil Co.'s New Harmony Realty Co. 1, NW SW 10-5s-14w	6- 6	McClosky and Waltersburg	252	2985	160	9	1	17	3
No name	Posey	Haynes & Thomas Drilling Corp.'s Walter & Matilda A. Seifert 1, NW SE 19-6s-12w	8-30	Pennsylvanian	25	409**	20	1	4	..	..
Mackey	Gibson	A. J. Walker's Oscar Schmidt 1-A, SE SW 13-3s-9w	7-26	Pennsylvanian	35/35w	965	20	1	2	..	..
No name	Jasper	United Development Co.s Oscar & Melvina Woodruff 1, SE SW 28-31n-5w	9-19	Trenton	10	1011	20	1	..	..	..
No name	Spencer	Trio Oil Co.'s Frank R. Swallow et al 1, SW SE 32-6s-7w	7-16	McClosky	15/20w	1005	20	1	..	..	..
8 Fields	.....	1939 Total	.....	.....	†63	†1558	340	17	7	21	3
		1938 DISCOVERIES									
Point	Posey	Sun Oil Co.'s W. W. Gray 1, NE NE 29-8s-14w	9- 2	McClosky	30	2709	None*	1	3	..	..
Huesler	Posey	Sun Oil Co.'s Sophia Dietz 1, SW SE 1-7s-12w	9-23	Waltersburg	29	1749	320	21	2	1	1
Griffin	Gibson	Fitzpatrick & Hayes' (A. W. Allen et al's Cooper Estate 1, NW NE 13-3s-14w	12-30	Cypress, Tar Sp., Waltersburg, McC. Aux Vases	1000	2920	1500	51	5	21	5
3 Fields	.....	1938 Total	.....	.....	†353	†2459	1820	73	10	22	6
		1937 DISCOVERIES									
Prairie Creek	Vigo	Carter Oil Co.'s Mrs. Louisa M. Paddock 1, NE 16-10n-10w	8-19	Niagaran	85	2140	400	19	1	1	..
1 Field	.....	1937 Total	.....	.....	†85	†2140	400	19	1	1	..
12 Fields	.....	Grand Total 1937-38-39	.....	.....	†137	†1832	2560	109	18	44	9

Note:—35/35w means 35 barrels of oil and 35 barrels of water. * Pool abandoned. **Plugged back from 2735 feet. †Average.

Independents Drill 72% of Current U. S. Wells

By Wm. H. STRANG, Staff Writer

THE alleged stifling of free enterprise alluded to so frequently in testimony before the Temporary National Economic Committee, certainly has no counterpart in the drilling branch of the industry. A survey made by THE OIL WEEKLY of wells drilled in the United States during the three months from June 1 to September 1, this year, reveals that 72 percent were drilled by smaller companies, including individuals and drilling contractors developing their own holdings.

During this period 7591 wells were completed, of which the larger companies owned only 2110 wells while smaller firms were credited with 5481 wells.

Only in Illinois did the larger companies drill more wells within the survey period than their smaller competitors. In Texas, Oklahoma, and remaining producing states the field was left almost entirely to the smaller companies, with Kansas the nearest typical state in balance of field activity.

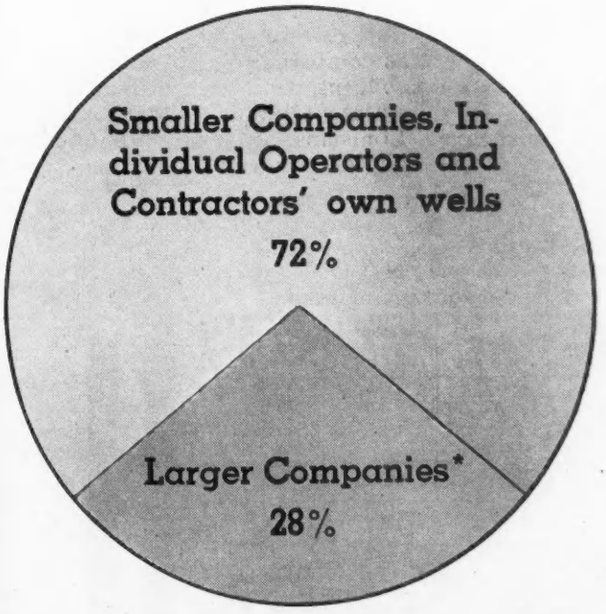
The survey also showed that small companies drilled 65 percent of total footage. Footage drilled during the three months was 23,897,680 feet, of which small companies accounted for 15,504,320 feet while the majors were drilling 8,393,360 feet. The average well drilled by the larger companies was deeper than that completed by smaller units. The difference of 40 percent, however, is surprising. Average depth of the 2110 wells drilled by larger firms was 3970 feet; average depth of 5481 wells drilled by small firms was 2830 feet.

A further breakdown revealed that small firms and individuals predominated in wildcat drilling, completing 84.3 percent of these wells and 77.1 percent of this class of footage. The 705 wildcats completed during the period included 2,555,730 feet of hole. The small companies were responsible for 594 of these tests and 1,971,141 feet of hole.

In proven fields the activity by larger companies was greater, accounting for 34.2 percent of the wells and 36.5 percent of the footage. Here 6886 tests required 21,341,950 feet of hole. Small companies were responsible for 4887 of the tests and 13,533,179 feet of hole.

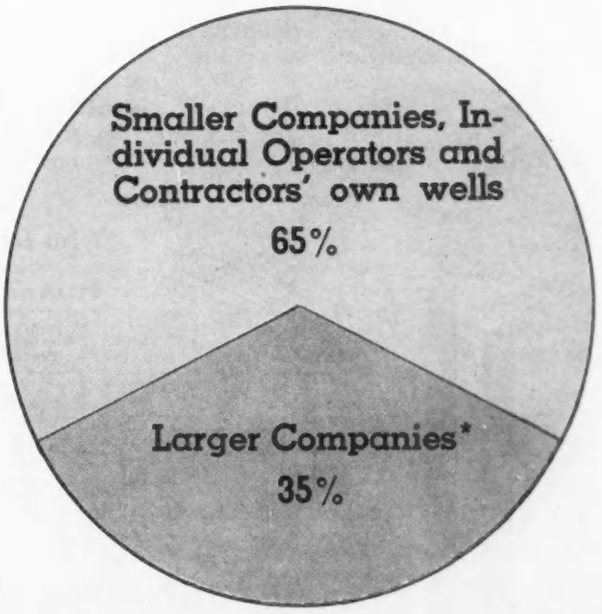
Texas led in activity with 2859 wells that were drilled 26 percent by large companies and 74 percent by smaller firms and individuals. Thus the small companies drilled 2128 of the wells in the state. On basis of footage, 66 percent of 10,-

WELLS DRILLED IN U. S.



Seventy-two percent of all wells drilled in United States are owned by smaller companies, individual operators and drilling contractors.

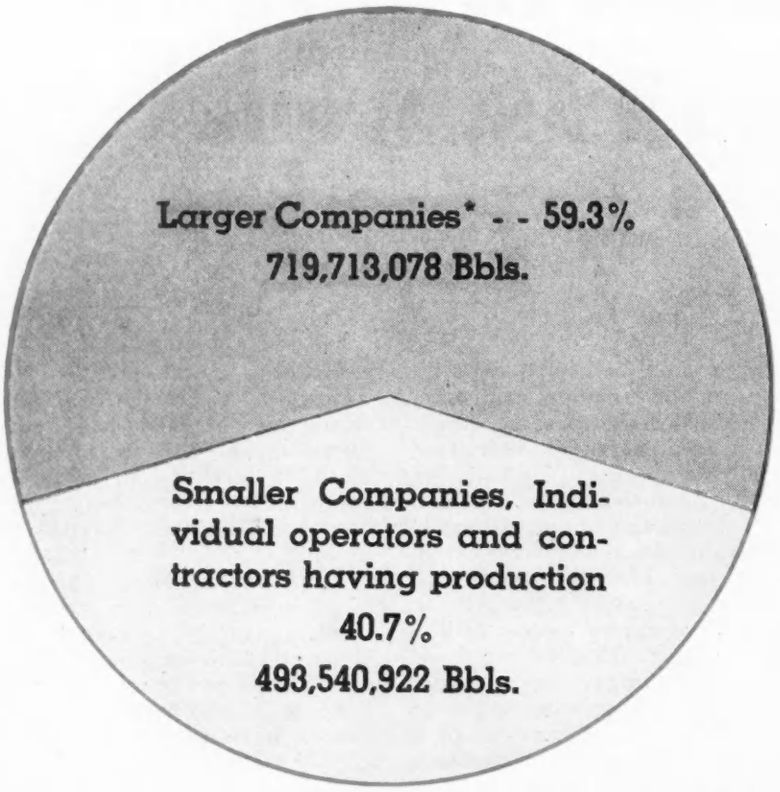
FOOTAGE DRILLED IN U. S.



Sixty-five percent of all footage drilled currently in the United States is owned by smaller companies, individual operators and drilling contractors.

* See list of companies in tabulation on following page.

U. S. CRUDE OIL PRODUCTION



Fifty-nine percent of United States production in 1938 was owned by the group of larger companies.

* See list of large companies in table below.

124,393 feet goes to the smaller operator.

Illinois, second in activity with 1016 wells, was drilled 63 percent by large firms. This, no doubt, is due to the concentration of major company activity in such outstanding fields as Centralia-Salem and Loudon.

In Oklahoma only 21 percent of 592 wells were drilled by the large companies, and the average depth of 3910 feet was 43.2 percent greater than the average well of the small operator.

Although the typical Kansas major-company well was 500 feet deeper than that drilled by small firms, the percentages (34 percent drilled by large concerns and 66 percent by small ones), are nearest the national ratio.

In California and Louisiana larger operators took more part in the field activity, drilling 43 and 45 percent respectively of all wells drilled in each state.

Considering as an entity the Rocky Mountain States, the Eastern States, Arkansas, Michigan, and the Illinois Basin states outside of Illinois, the major company development therein was at its lowest level. Only 10 percent of the completions in this group were made by large companies; 16 percent of the footage drilled resulted from these wells.

An accompanying table shows a breakdown of these data by principal states, and lists the 51 companies considered as members of the "larger" group in this study. While these companies are not all within the conventional conception of a major firm, they are the bulk of those with extensive producing holdings. If the distinction was made between the approximate 25 major companies and other operators, the figures would indicate an even greater disposition on the part of the non-integrated firms to assume the risks of drilling.

Somewhat of an anomaly to the distribution of drilling is the fact that in 1938 the same group of large companies produced 59.3 percent of all oil in the United States. While at first blush it appears that larger companies get more return for their drilling effort, consideration must be given to the fact that as a general practice these firms dispose of properties when they enter the stripper stage and are anxious to purchase flush fields. In addition major companies attain a greater ratio of successful completions and, as compared to smaller companies, concentrate their drilling in the states (Illinois, California, and Louisiana) that are allowed the highest per-well production.

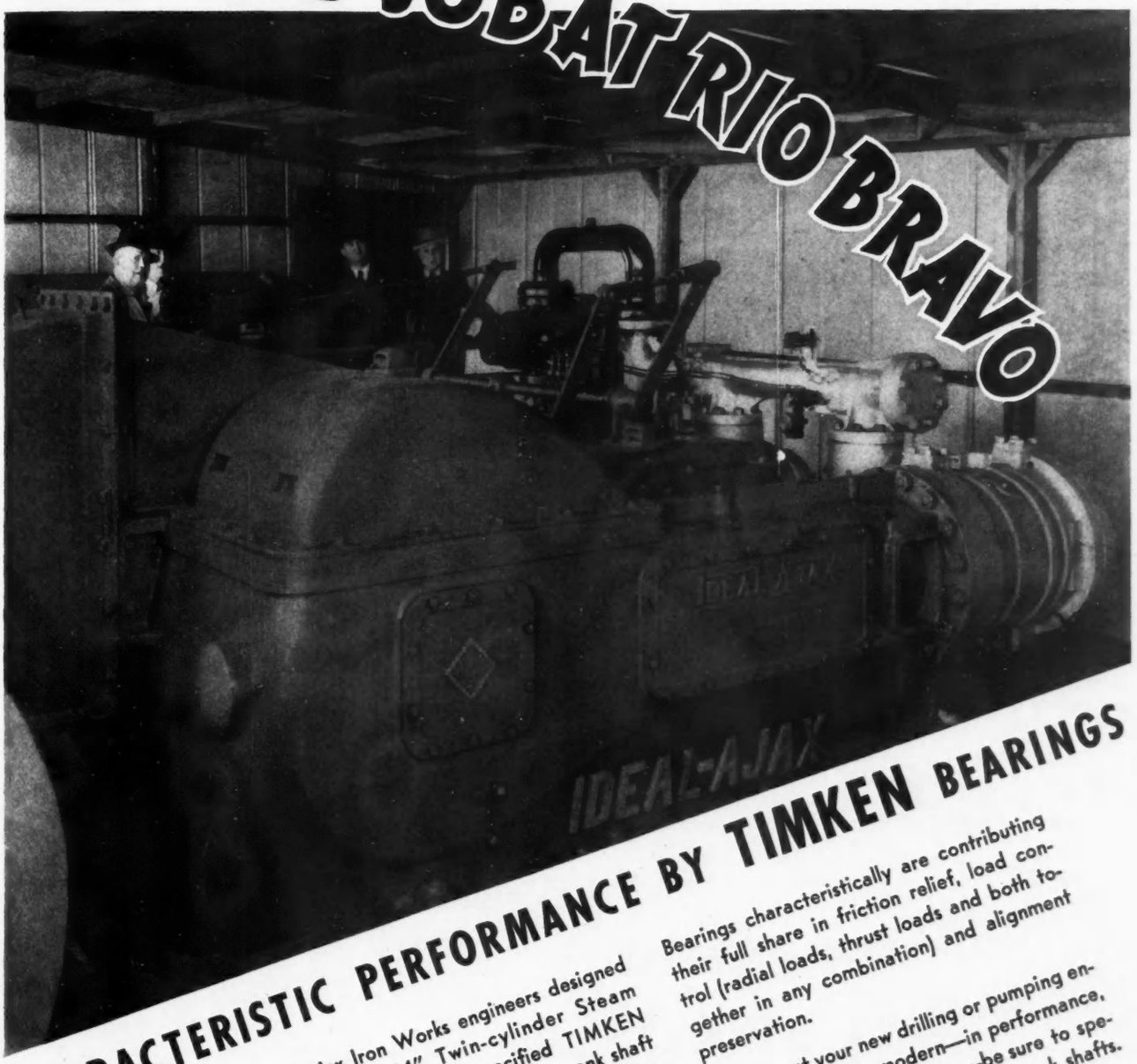
Who Drills U. S. Wells

STATE	WELLS DRILLED			FOOTAGE DRILLED		
	Total Number	Large Companies Percent*	Small Companies Percent†	Total Number	Large Companies Percent*	Small Companies Percent†
Texas	2859	26	74	10,124,393	34	66
Illinois	1016	63	37	2,163,779	57	43
Oklahoma	592	21	79	1,765,359	28	72
Kansas	492	34	66	1,481,356	37	63
Louisiana	305	45	55	2,007,081	54	46
California	276	43	57	1,642,705	52	48
Others	2051	10	90	4,713,007	16	84
United States	7591	28	72	23,897,680	35	65

* In the above tabulation, the following companies were considered as the "larger companies.": Amerada, Arkansas Fuel, Arkansas Natural Gas, Atlantic, Barnsdall, California Co., Carter, Champlain Refining, C. C. M. O., Cities Service, Continental, Deep Rock, Empire, General Crude, General Pet., Geo. F. Getty, Gulf Oil, Honolulu, Houston Oil, Humble, I. T. I. O., Kettleman North Dome Assn., Magnolia, Mid-Continent, Ohio, Pan-American, Phillips, Pure, Republic Prod., Richfield, Rio Bravo, Shell, Sinclair, Skelly, S. O. Calif., S. O. Indiana, S. O. Kansas, S. O. Louisiana, S. O. Texas, Stanolind, Sun, Superior (Cal.), Superior (Okla.), Texas, T. P. Coal & Oil, Tide-Water Associated, Union, Wilcox.

† Besides small companies includes individual operators and drilling contractors, who drill and own their own wells in addition to doing contract work. 90 percent of the contractors are estimated to have their own production. The "small companies, individual operators and drilling contractors" numbered in excess of 2500.

ON THE JOB AT RIO BRAVO



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Magnetic Gradient Maps for Illinois and Southern Michigan

By W. P. JENNY
Consulting Geologist and Geophysicist

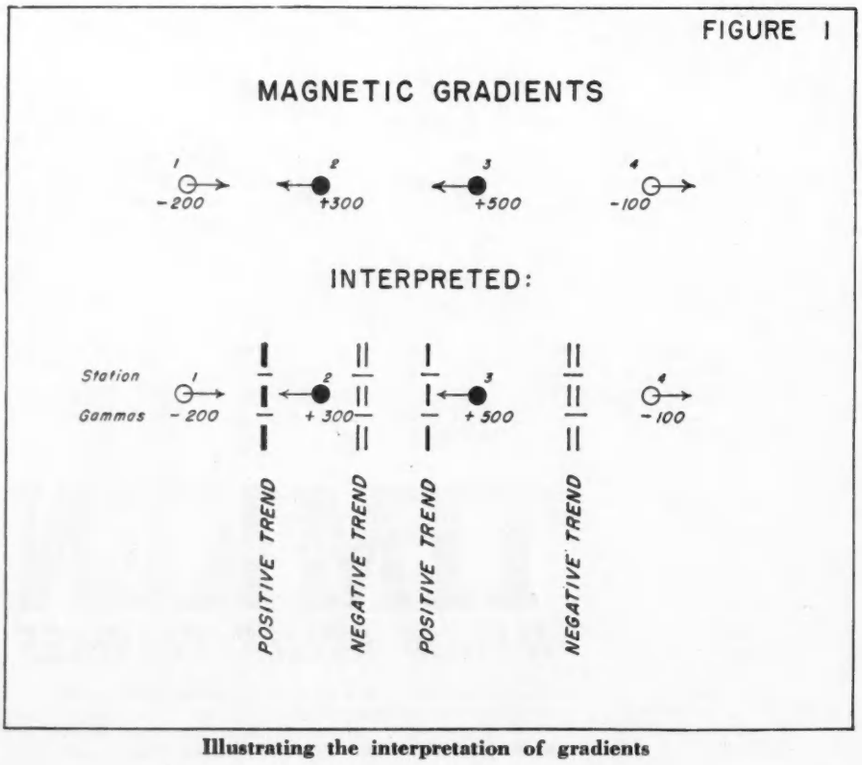
THE magnetic gradient maps represent practically the same magnetic information as do the magnetic vector maps, previously published by the writer for a number of oil states[1, 2, 3]. However, on account of the simplicity of the gradient and its close approach to the geological terms of dip and strike, the gradient maps should be more easily understood and interpreted into possible terms of structure.

The process of computing the magnetic vectors from the U. S. Coast and Geodetic Survey's data[4] has been fully explained in the papers mentioned above and may be shortly summarized as follows:

The differences between the actually measured and the normal values of the total vertical and horizontal components of the earth's magnetic field are combined into a magnetic vector in space, which indicates the intensity and direction of the local magnetic force at each specific station.

The magnetic gradients represent in a simple form the essential magnetic information revealed by the vectors: a black station point indicates a positive magnetic anomaly, a circle a negative anomaly; the arrow indicates the direction of the horizontal local force, which is, of course, directed toward a magnetic maximum. The figure below the station number indicates the intensity of the locally anomalous vertical intensity in gammas.

FIGURE 1



Illustrating the interpretation of gradients

Magnetic Interpretation of Gradient Maps

Due to the long distances between the stations, the information revealed by the gradients is mainly of a regional or semi-regional character. Only occasionally, where a station is located close enough to a large local anomaly, may the gradient be expected to yield local information.

If the gradients over large areas are about parallel to each other, it is probable that regional positive and negative trends, running at right angles to the direction of the gradients, may be expected in such areas.

If the direction of the gradients varies greatly in a particular area, it is probable that this is due to localized anomalies.

Figure 1 illustrates that the gradients point away from magnetic negative trends and towards positive trends. Between stations 3 and 2 a negative and a positive trend must occur, because at station 3 a positive anomaly of 500 gammas exists and the gradient points toward a still stronger anomaly farther west; inasmuch as at station 2 a positive anomaly of only 300 gammas exists and since the gradient points toward a stronger anomaly between stations 1 and 2, the gradients at stations 2 and 3 cannot be associated with the same positive anomaly, but

FIGURE 2

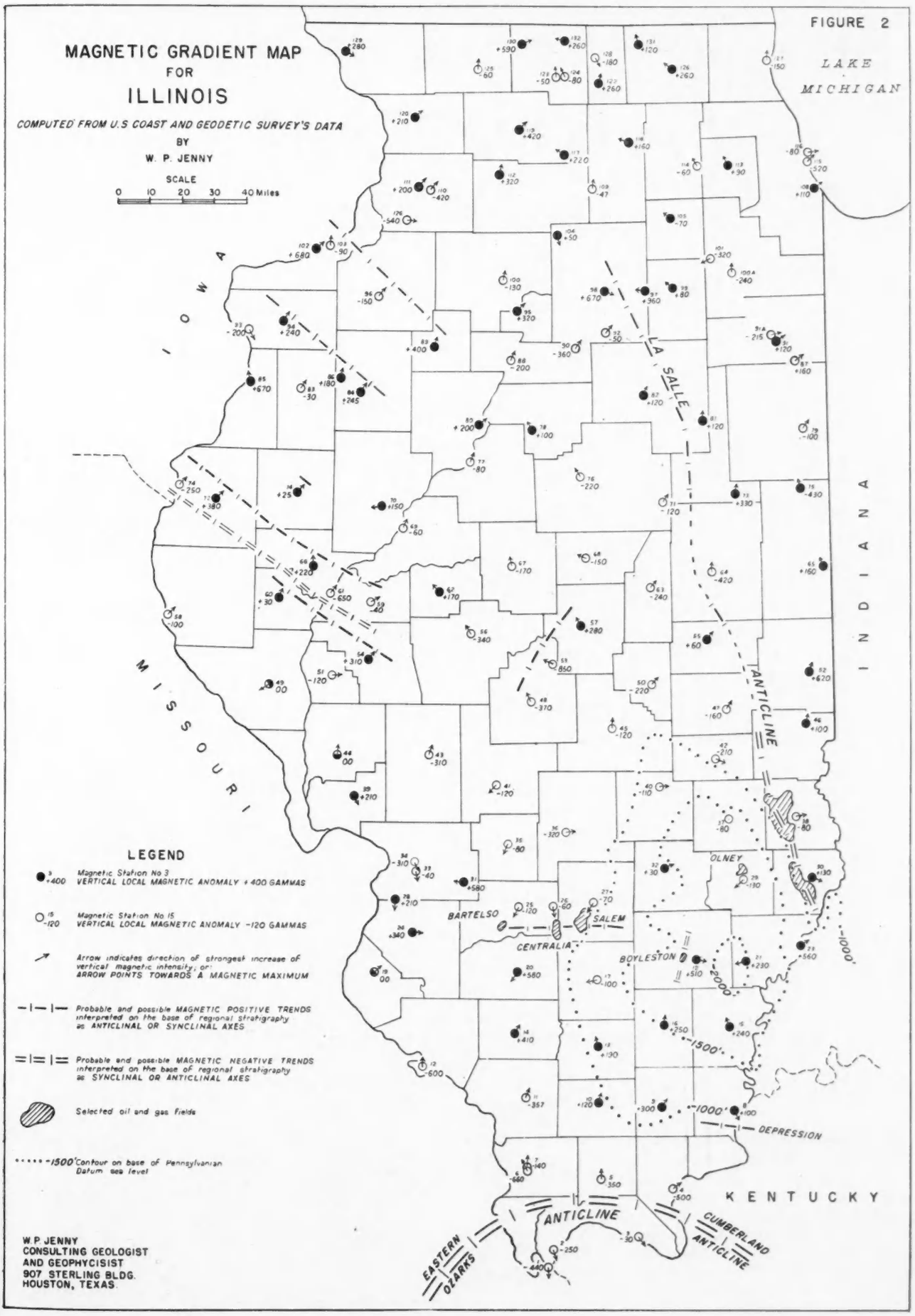
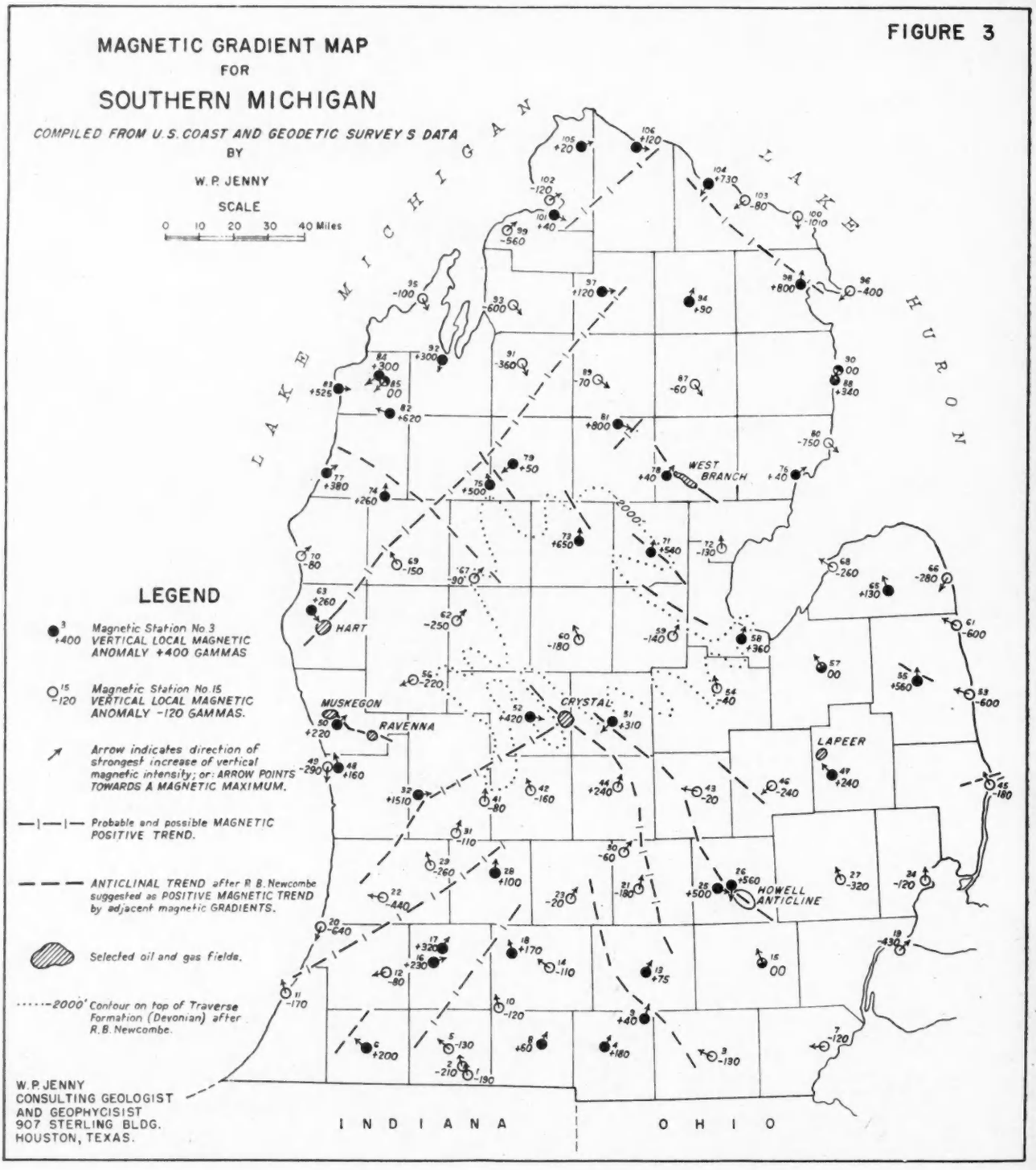

MAGNETIC GRADIENT MAP
FOR
ILLINOIS
COMPUTED FROM U.S COAST AND GEODETIC SURVEY'S DATA
BY
W. P. JENNY
SCALE
0 10 20 30 40 Miles
LAKE MICHIGAN
INDIANA
IOWA
MISSOURI
KENTUCKY
LA SALLE ANTICLINE
ANTICLINE
OLNEY
SALEM
BARTELSO
CENTRALIA
BOYLESTON
DEPRESSION
EASTERN OZARKS ANTICLINE
CUMBERLAND ANTICLINE
LEGEND
Magnetic Station No 3
VERTICAL LOCAL MAGNETIC ANOMALY + 400 GAMMAS
Magnetic Station No 15
VERTICAL LOCAL MAGNETIC ANOMALY -120 GAMMAS
Arrow indicates direction of strongest increase of vertical magnetic intensity; or: ARROW POINTS TOWARDS A MAGNETIC MAXIMUM
Probable and possible MAGNETIC POSITIVE TRENDS interpreted on the base of regional stratigraphy as ANTICLINAL OR SYNCLINAL AXES
Probable and possible MAGNETIC NEGATIVE TRENDS interpreted on the base of regional stratigraphy as SYNCLINAL OR ANTICLINAL AXES
Selected oil and gas fields
-1500' Contour on base of Pennsylvanian Datum sea level
W.P JENNY
CONSULTING GEOLOGIST
AND GEOPHYCISIST
907 STERLING BLDG.
HOUSTON, TEXAS.

FIGURE 3



must be separated by a negative trend.

Regional Geological Data for Illinois and Michigan

The main regional structural feature, common to Illinois and Michigan, is a large Basin centering in the area of the 2000-foot contour at the base of the Pennsylvanian in Illinois (Figure 2) and in the area of the 2000-foot contour on top of the Traverse in Michigan (Figure 3). In a south-north profile through both states, the pre-Cambrian granite of the Basement complex is expected at above 3000 feet in the southern and northern parts of Illinois and Michigan and below 7000 feet in the heart of the two Basins.

The outcropping formation in the central area of both basins consists of Pennsylvanian. The Mississipian, Devonian, Silurian and Ordovician outcrop in belts of varying width around the central Pennsylvanian core. The major portion of both states is covered by a 200-foot to 400-foot thick blanket of glacial drift.

Geological Interpretation of Gradient Maps

General

A superficial study of the gradient maps of Illinois and Michigan shows that the intensity of the

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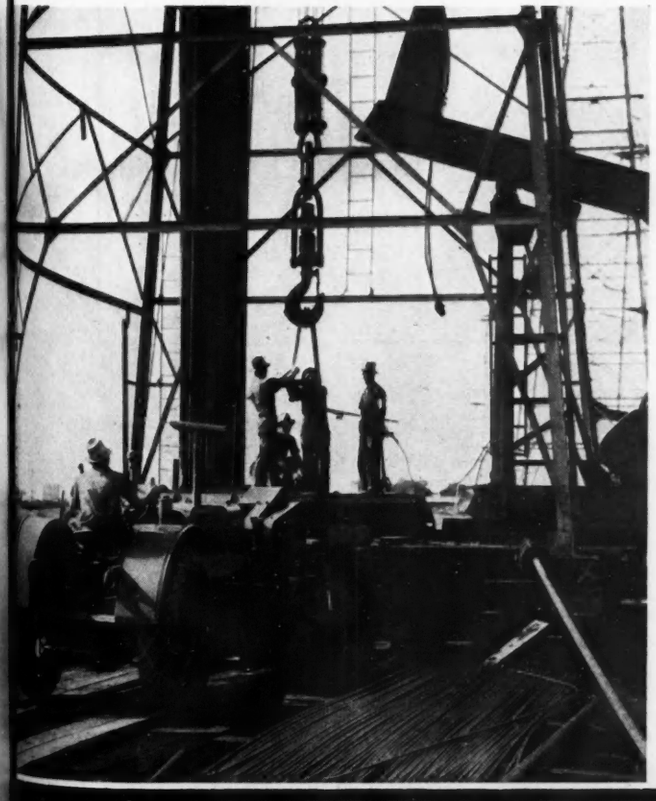

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FIGURE 4

W. P. JENNY
CONSULTING GEOLOGIST
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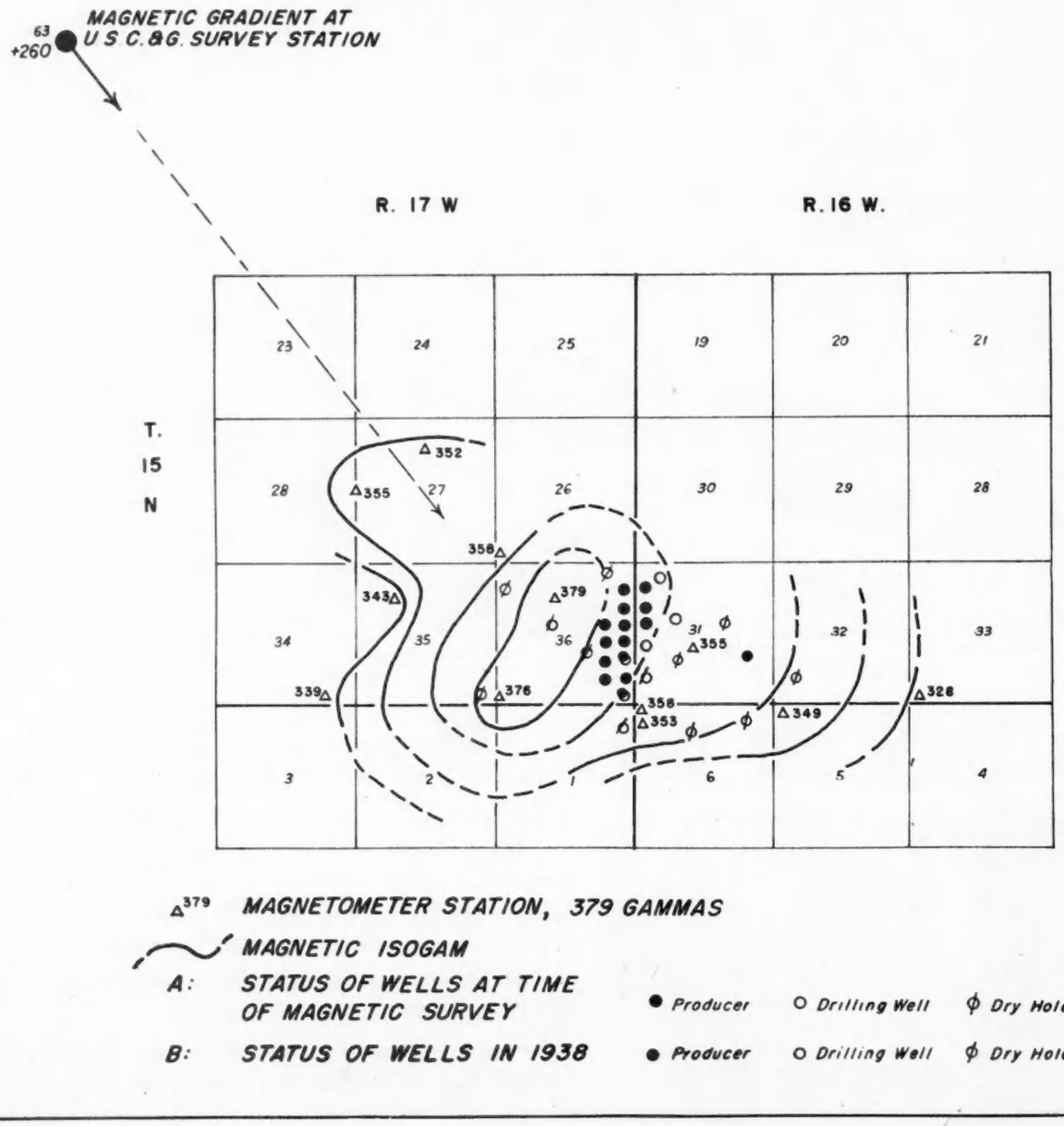
907 STERLING BLDG
HOUSTON, TEXAS

MAGNETIC SURVEY
HART FIELD
OCEANA CO., MICHIGAN



local anomalies varies from a few hundred gammas plus to a few hundred gammas minus and that the positive and negative anomalies are distributed about equally over the whole state. If these anomalies were due essentially to structural features or petrographic changes in the Basement complex, we would expect weak, largely negative anomalies in the center of the Basins, and strong, largely positive anomalies on the edge of the Basins.

In Illinois quite obviously the opposite is true, inasmuch as along the southern edge of the Basin all anomalies are strongly negative and in the heart of the Basin all anomalies are strongly positive.

This circumstance clearly proves that certain shallow sedimentary formations must contain considerable amounts of magnetic materials and that the thickening of these magnetic formations towards the center of the Basins not only counterbalances, but, in the case of Illinois, even outweighs the decrease of the magnetic intensity resulting from a greater depth of the Basement complex.

Therefore the majority of the magnetic anomalies indicated by the magnetic gradients in Illinois and Michigan, especially in the central area of the Basins, must be influenced by structures and/or stratigraphic changes within some shal-

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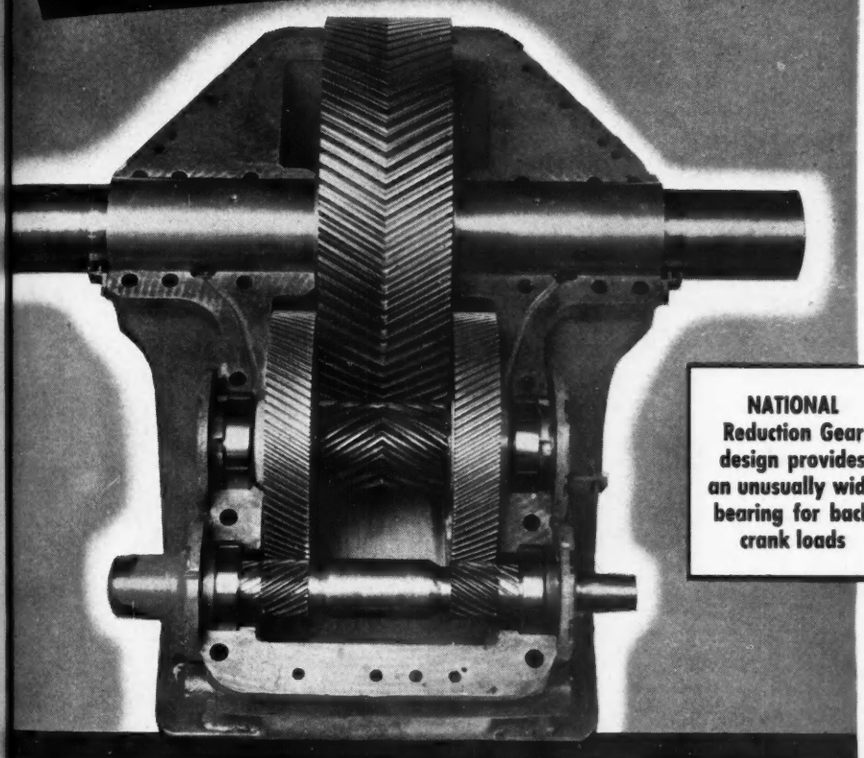

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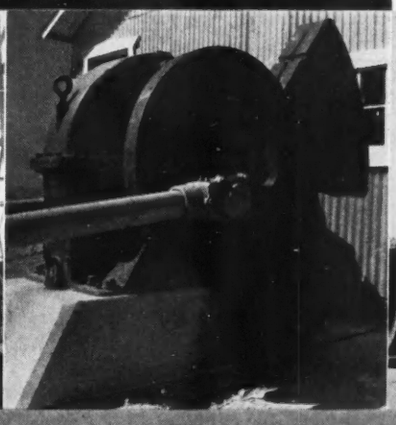
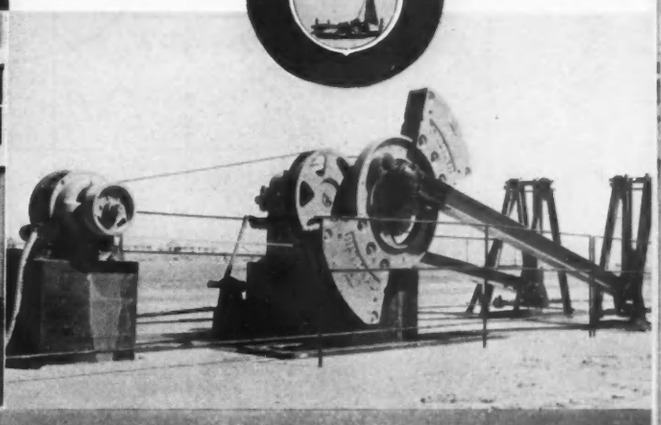


A Four Well Hook-up in Texas Showing National Concentric Crank.



A National Concentric Crank Equipped Four Well Hook-up in Central Kansas.

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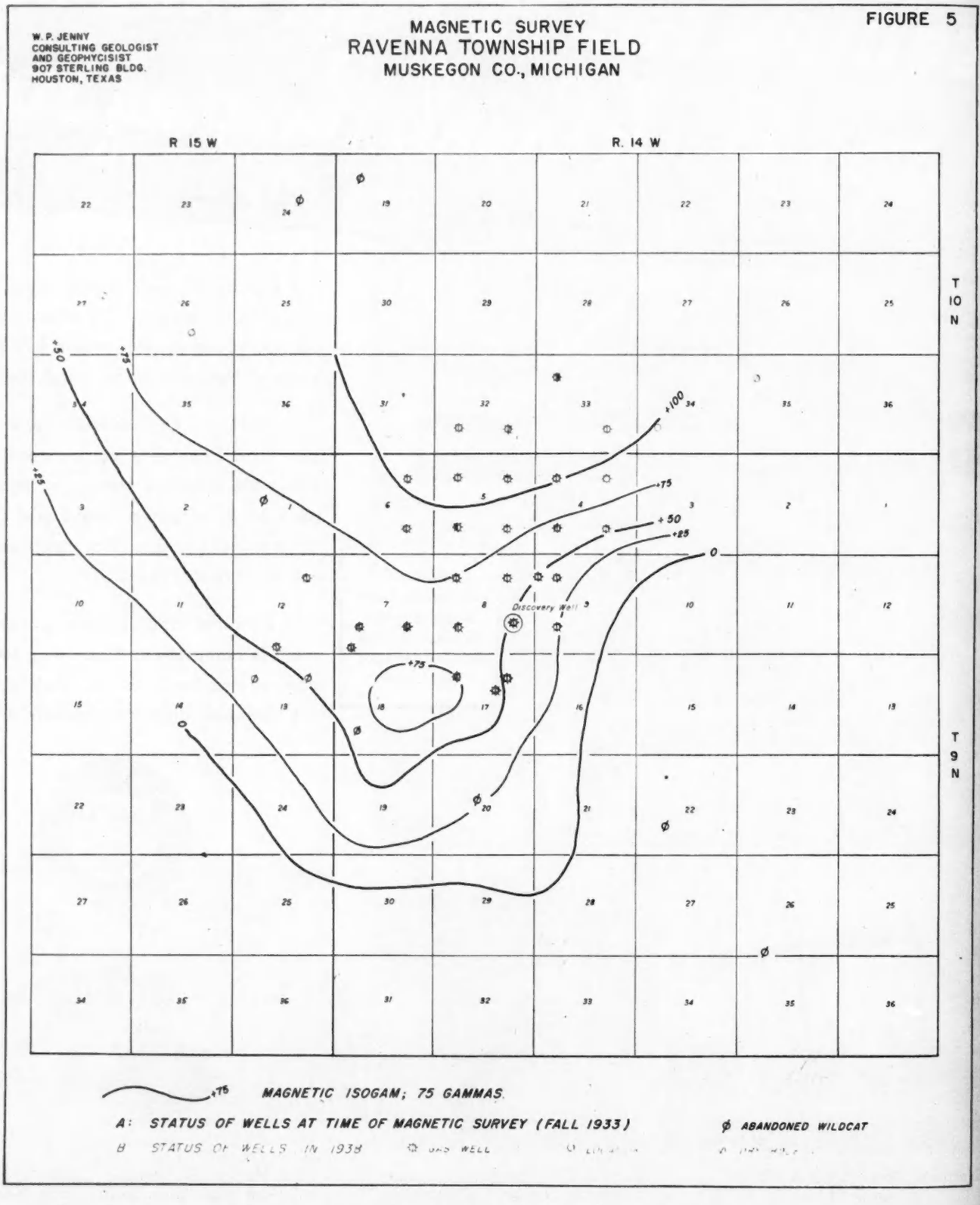

low sedimentary formations and should thus be of interest to the petroleum geologist.

Illinois

If we assume, for example, that the Pennsylvanian and Mississippian shales are strongly magnetic and that the limestones and dolomites of the Ordovician are practically non-magnetic, we may logically explain the positive anomalies in the center of the Basin as due to a thickening of the Pennsylvanian and Missippian shales and the negative east-westerly magnetic trend in the southernmost part of the state as due to an Ordovician anticline at shallow depth. This trend may connect the Cumberland River anticline of Kentucky (also a magnetic negative trend), with a magnetic negative trend running in a southwesterly direction along the east side of the Ozarks.

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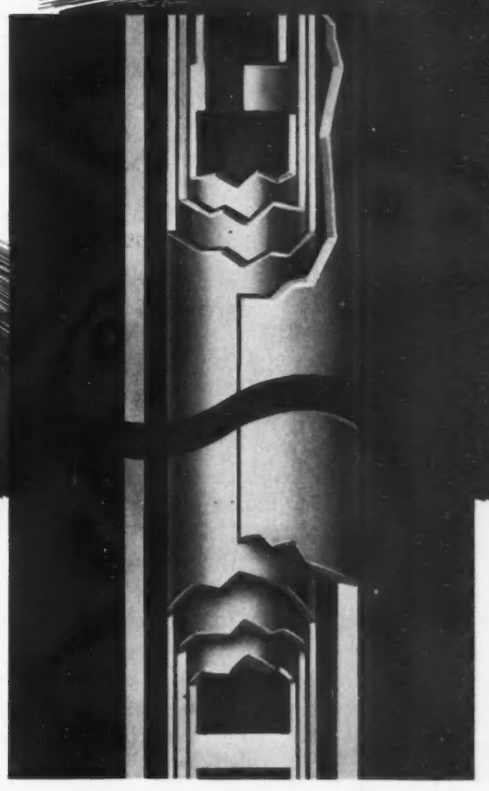

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typical example of a combined structural and stratigraphic interpretation of the magnetic gradients. Along the northern portion of the anticline the Basement is evidently close enough to the surface to create a positive magnetic trend, corresponding to the anticlinal trend.

As the anticline dips toward the south, it is covered by the magnetic Pennsylvanian and Mississippian shales. But due to the anticlinal uplift of the non-magnetic Ordovician the magnetic shales are thinner along the anticlinal crest than along its flanks and the anticline appears therefore as a negative magnetic trend.

The same interpretation may be applied to local structures. Thus the gradients at Olney (29) and at Fairfield (22) appear to indicate that the local structures of the Olney and Boyleston fields may correspond to negative magnetic anomalies.

The positive trends in the northwestern part of the state are probably indicative of anticlinal structural trends.

The gradients at Carlyle (25), Sandoval (26) and Salem (27) all point towards the south, suggesting the existence of a semi-regional east-westerly positive trend, and the gradients further appear to be deflected locally towards the Bartelso, Centralia and Salem fields, respectively, suggesting that the local uplifts in these fields correspond to local magnetic maxima along a semi-regional positive trend.

Southern Michigan

The average direction of the gradients in southwestern Michigan is southeast-northwest. The average direction of the gradients in south-central and central Michigan is southwest-northeast. Therefore, we expect the regional magnetic trends to assume a northeast-southwesterly direction in southwestern Michigan and a northwest-southeasterly direction in south-central and central Michigan.

This general interpretation is supported by Newcombe's subsurface structural contour map.[5] A number of the anticlinal trends of this map have been plotted on the enclosed gradient map. The Howell-Owosso anticlinal trend, for example, is indicated by gradients (51), (43), (25) and (26) as a positive trend. The Howell anticline, located along this trend, is indicated as a strongly positive magnetic anomaly.

To the north of gradients (77), (74) and (67) another anticlinal trend is plotted, which is indicated as a positive magnetic trend by these gradients.

To judge from the gradients, it appears that the direction of the magnetic trends in the southwestern part of the state is slightly more northeasterly than the direction of the anticlinal trends on Newcombe's map. However, more detailed magnetic investigations might give a closer agreement.

Southwest-northeasterly magnetic trends seem to be indicated by the gradients also in the southeastern and northwestern parts of the state.

It appears from a study of the gradient map and also from more detailed surveys the writer made in this state that, as a first approximation, we may interpret magnetic positive trends as anticlinal axes. Of course, we always have to keep in mind that stratigraphic changes may interfere with the structural interpretation.

A few of the fields, which appear to be indicated as magnetic maxima by nearby gradients are shown on the map.

The gradient at Hart (63) induced the writer in the fall of 1933 to make a short survey of the then newly discovered Hart field. The result of this survey and its agreement with later development in the field are shown in Figure 4.

The magnetically indicated deep-seated northeast-southwesterly anticline is probably the primary, differential settling and cavities in the Traverse[6] on the flank of this uplift the secondary reason for the oil accumulation.

Also in the fall of 1933 the writer made a magnetic survey along the anticline east of Muskegon and recommended the area of the present Ravenna Township field (discovered in 1936) on the strength of the magnetic anomaly shown in Figure 5.

Practical Application of Gradient Maps

While some local information may occasionally be derived from a gradient, it should be fully realized that, due to the large distances of the stations, the information revealed by the gradient maps is essentially of a regional or semi-regional nature. The maxima indicated by the gradients may be one mile or 10 miles distant, and indicative of a regional trend only, along which local closure must first be established by detailed magnetometer surveys.

Regional geological information revealed by the gradient maps appears to well agree with the known subsurface geology in these two states. Even some additional geological information—as for example, the presence of southwest-northeasterly trends in southwestern Michigan, which seems still to be under discussion from a geological point of view alone; or a possible connection of the Cumberland anticline with the Ozarks—may be gained from a study of the gradient maps in states geologically as well known as the two states under discussion. It appears, therefore, that the magnetic gradient maps should be a source of most valuable geological information in states where the subsurface geology is less known and especially in foreign countries.

As far as local structures are concerned the gradient maps should be of considerable assistance for detailed magnetic surveys, inasmuch as they give a fair off-hand idea about the extent, location and size of regional and semi-regional anomalies in the general area to be investigated. Through their regional magnetic information, the gradient maps should also greatly assist in a correct interpretation of local magnetic anomalies into geological terms, structural and stratigraphic.

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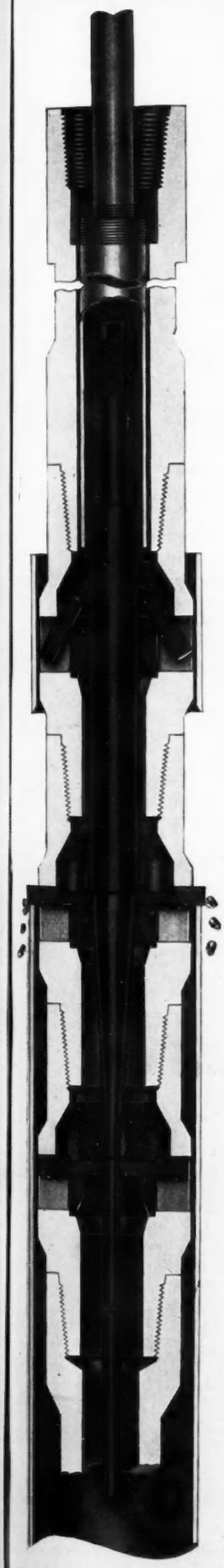
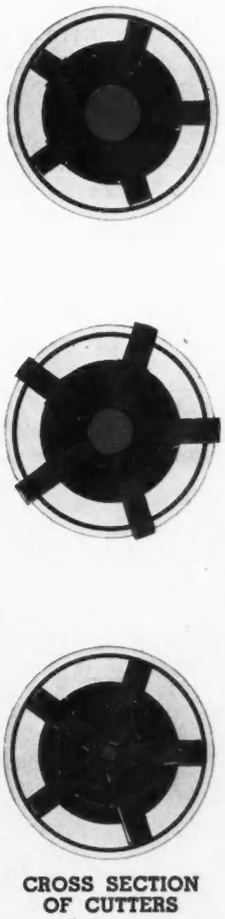


EXPANDING CASING MILL



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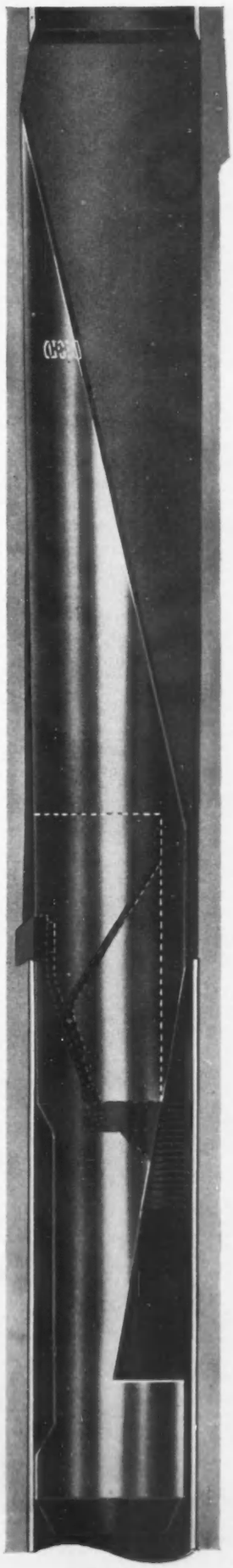

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Much Sand Successfully Separated from Oil

By JOHN C. ALBRIGHT

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In some instances 25 percent of the total production consists of sand, which is fine enough grained to remain in suspension. The sand also is quite abrasive, cutting flow controls and damaging liners to such an extent wells often must be reconditioned early in their flowing life, and more or less frequently thereafter.

Methods of separating the sand from the oil include the use of large tanks, where the oil is subjected to a sufficient quiescent zone, to more elaborate equipment where automatic instruments govern the volume of temperatures and wash water.

The Wilmington field produces from multiple sands, the uppermost being the Ranger, which gives the most difficulty from floating sand. Many wells have been completed for simultaneous production of oil from three producing zones.

The construction of the sand separators follow closely the style of gun barrels and other vessels of this nature. They usually are constructed of a conventional 200 to 500-barrel capacity steel tank, mounted on an inverted conical base supported by a skirt or structural steel framework. The function of the conical base is to accumulate the sand and permit it to be flushed out periodically. It is equipped with a pipe outlet and valve control. The top of the vessel is equipped with a standard

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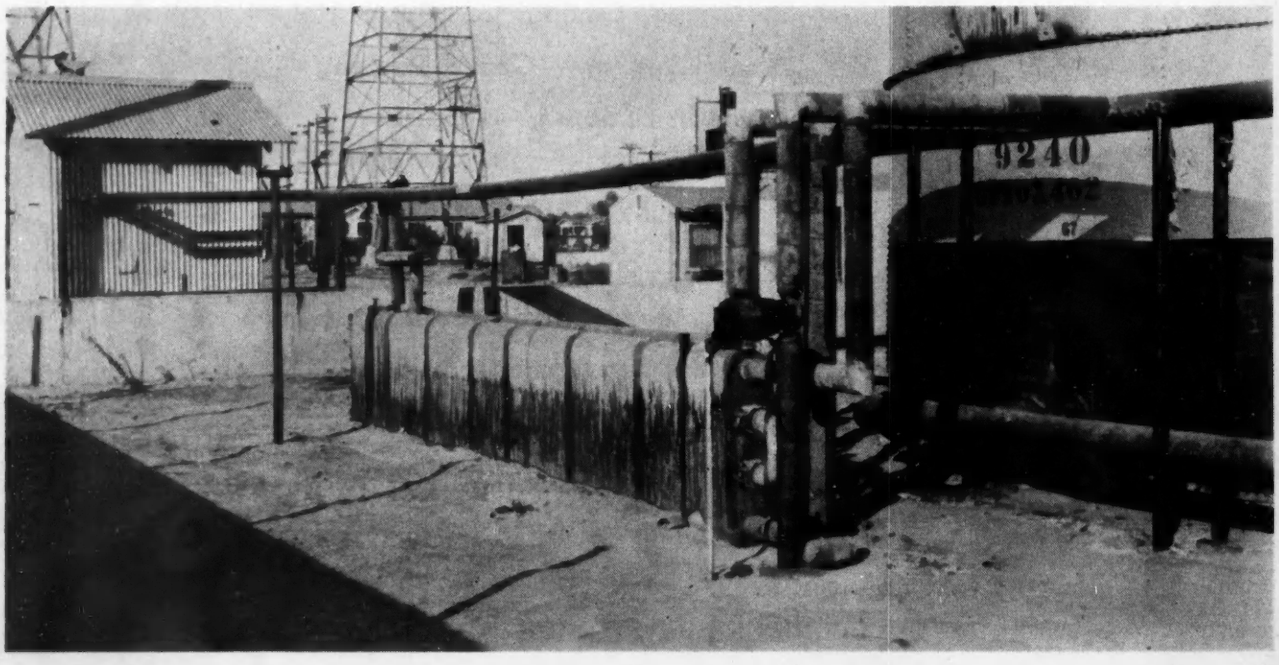

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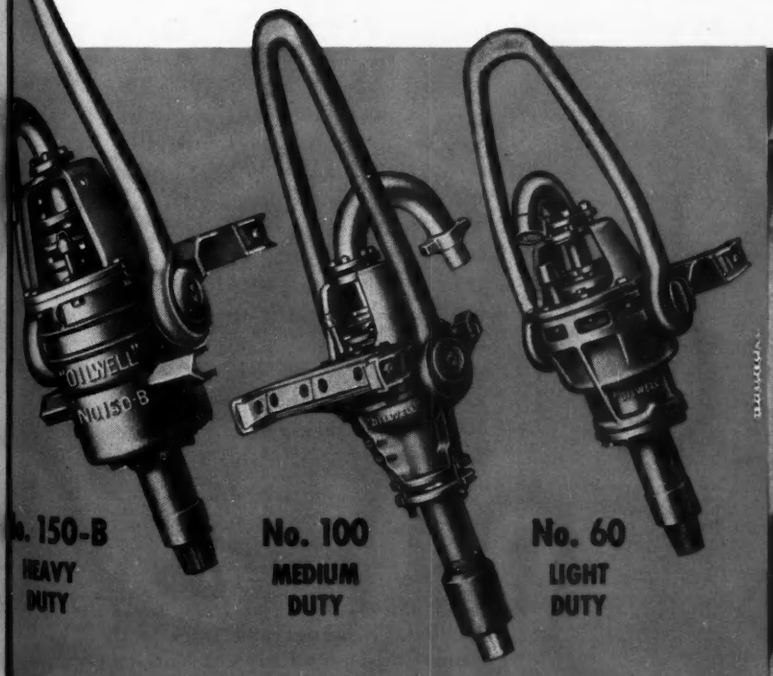
76,700 feet of drilling with only one "Oilwell" DI-HARD Water Tube . . .

THE unique construction of the DI-HARD water tube is responsible for this exceptional Swivel service. The water tube is armored inside and outside with DI-HARD. This patented metal is extremely hard—over 600 Brinell. It has high resistance to abrasion and a very low coefficient of friction. On the inside of the tube, DI-HARD resists the abrasive action of the fluid. On the outside, DI-HARD greatly reduces wear on both the water tube and packing. Only "Oilwell" Swivels are equipped with water tubes armored with this remarkable metal which outlasts the best steel many times.

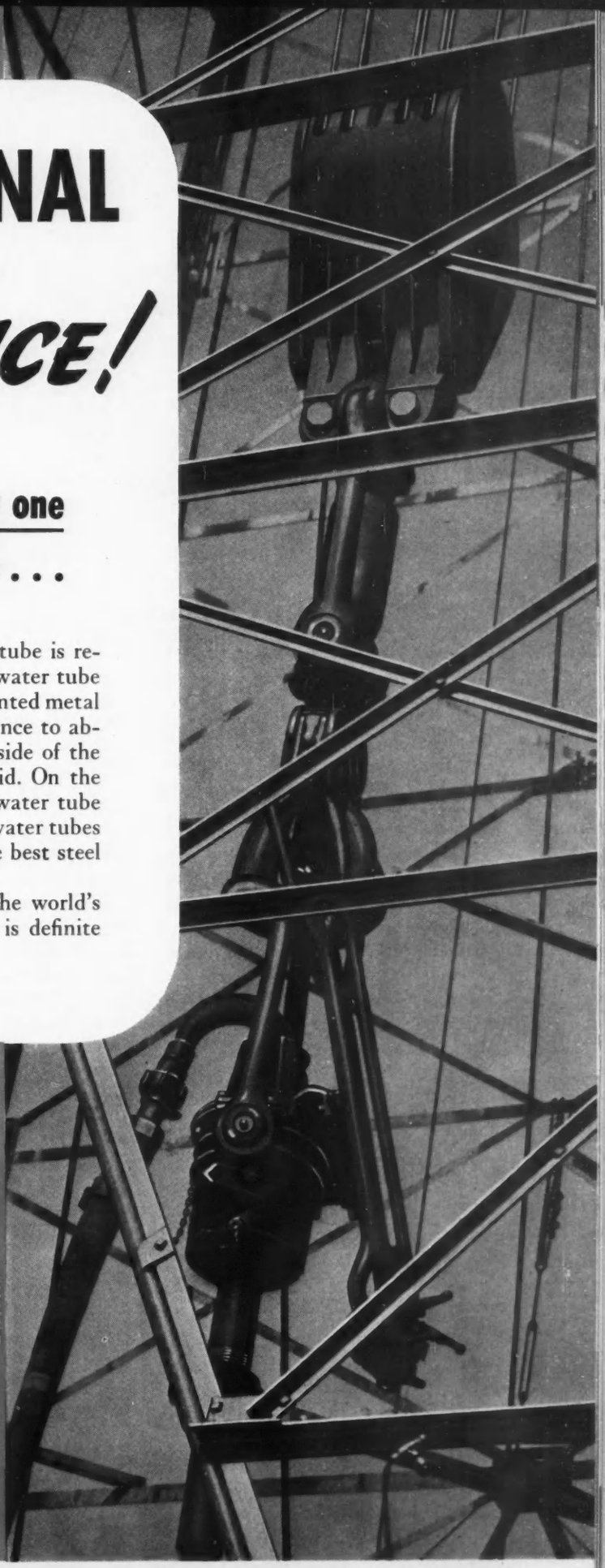
"Oilwell" Swivels have been selected for many of the world's deepest wells, including the deepest ever drilled. This is definite proof of their strength and dependability.



No. 150-B HEAVY DUTY

No. 100 MEDIUM DUTY

No. 60 LIGHT DUTY

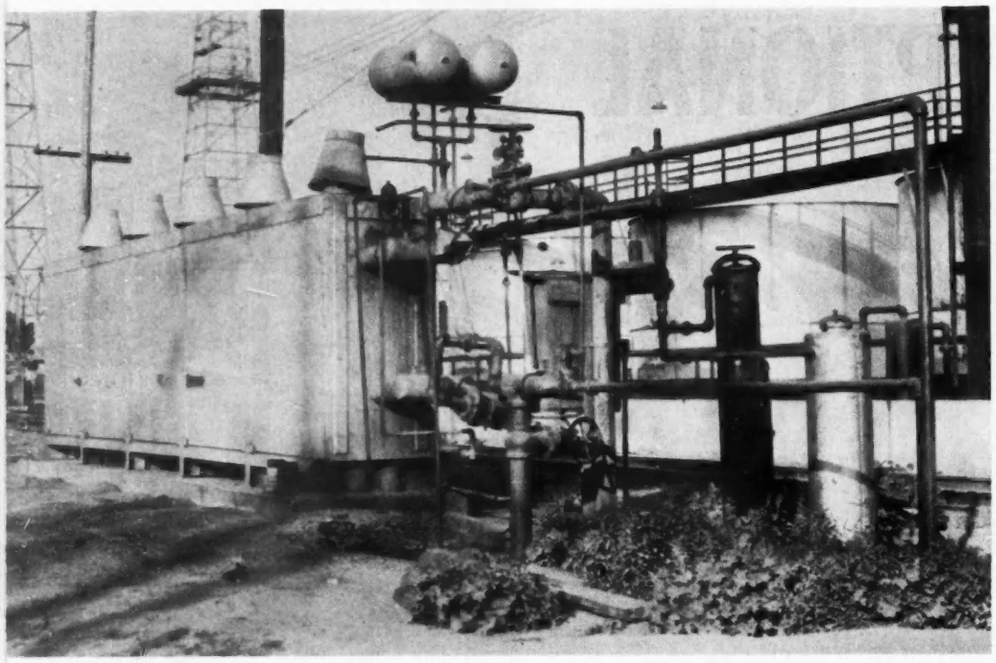


"Oilwell"

OIL WELL SUPPLY COMPANY

Branch Stores in all Oil Fields

Subsidiary of United States Steel Corporation

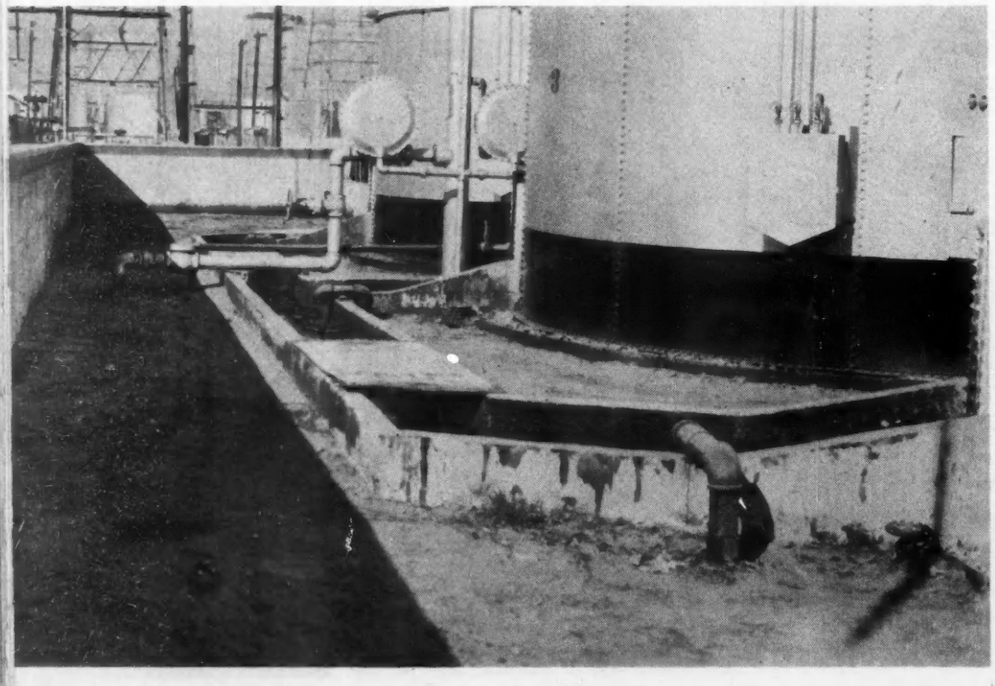


A type of five-unit heater used at Wilmington to heat oil during sand removal operations.

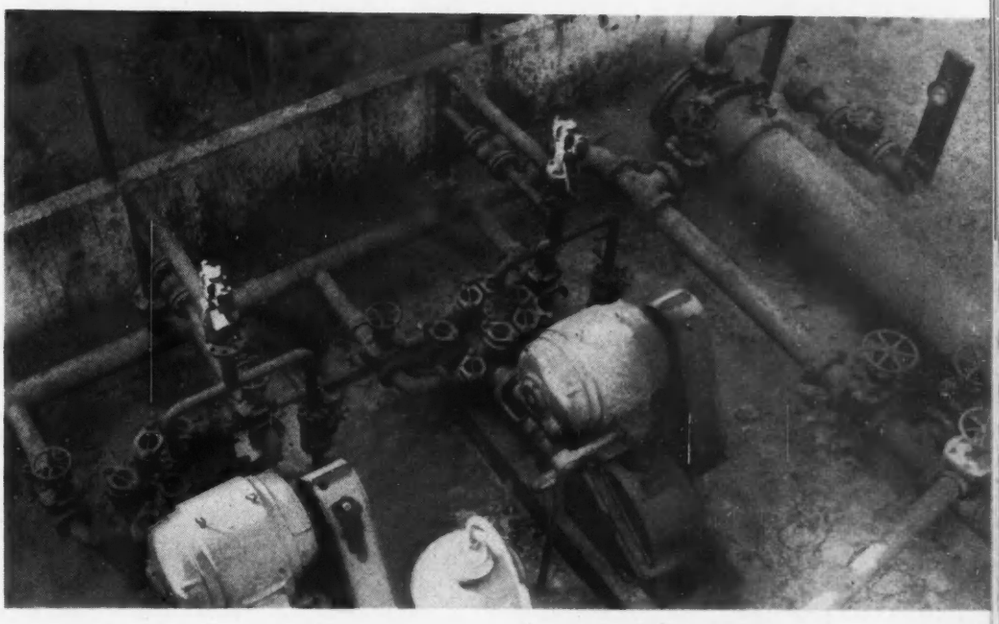
cone deck built with a slope of about 1 inch per foot. A 12-inch manhole, or opening, is usually provided at the apex for connecting a gas separating "boot" about 3½ feet in diameter and 7½ feet in height. In some installations, the auxiliary gas separator is attached to the side of the sand segregator; while on others are supported away from the tank but connected so the oil, sand and water may flow into downspouts for water treatment or washing. On tanks where the "boot" is flanged to the top of the tank, a "balancing column" is inserted in the tank and connected to the flanged bottom of the bottom above. The neck of such a column is about 12 inches in diameter and about 3 feet in length, and then is abruptly enlarged to 23 inches in diameter for a distance of about 13 feet, where devices are installed for spreading the oil, sand and water below the surface of a body of heated water carried at a definite level within the tank.

Two methods of heating are employed at Wilmington, one using water in the lower part of the vessel, circulated through an outside heater to obtain the temperature necessary for lowering the viscosity of the oil until the sand will settle out in the inverted conical base. The other method consists of the use of closed heating coils which carry a circulating volume of clean, distilled water to obtain the required temperatures by exchange of heat between the water and the oil being treated. The first method has shown evidence of inefficient operation, due to the circulation through the heater tubes of muck, sand and other foreign matter settled out from the oil into the body of water below the oil in the vessel, and which soon chokes the flow of heating water and requires frequent cleaning.

When clean circulation of the heating medium is employed, the hot water generator is located at some distance from the treating tanks, generally separated from each other by a concrete fire-wall. Gas is the fuel employed, and the rate of heating is controlled with automatic instruments. The coils which transfer the heat from the circulating water to the oil in the vessel are sometimes installed in three sections, the largest and most effective being placed within the area where the oil is spread out below the central column. Two other coils are placed within the column, one at the upper end and one near the lower, all three being operated in series with the flow of hot water carried in counter-flow to the oil entering the vessel. Gradual heating of the oil is obtained



Sand flumes used on lease tanks to facilitate cleaning sand after settling. Sand with some oil cut with water flows down flumes to underground pit where sand is removed as required and trucked to disposal pits.

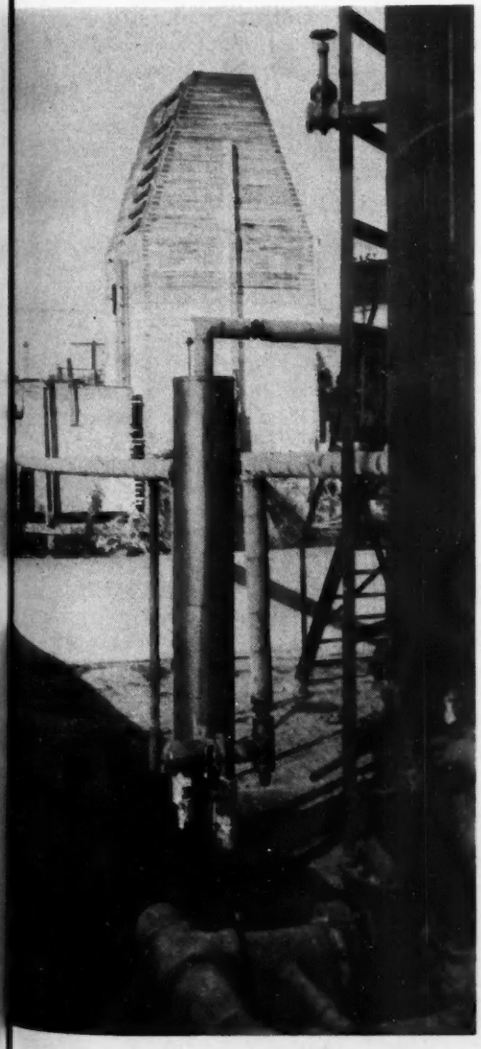


Motor driven reciprocating pumps set at flow tank and sand settling batteries to circulate oil when treating for sand removal.

in this manner without releasing an undue amount of gas at the top of the column, and bringing the temperature to that required when the oil is spread throughout the lowest point that it reaches in the vessel.

The vessel, when erected and made ready for operation is charged with a sufficient amount of water that the spreading device and the lowest heating coils are submerged, requiring approximately 35 barrels of fluid to reach the desired level, and which is necessary for washing the oil as it receives its final application of heat.

The oil, gas, sand and formation water—if any—are passed directly to the unit from the well, first passing through the conventional oil and gas separator if a considerable volume of gas is produced from the well, and enters the auxiliary gas separator through a perforated pipe extending through the side of the "boot." Gas released from the oil, or traveling with it is removed from the boot through a pipe attached to the upper end, looping back to the top of the vessel. All vapors are subsequently released through an automatic valve and is piped to gasoline plants, or is used as fuel in the water heating units, or generators as they are frequently named.



Water circulating pump and insulating piping installation at sand removal battery.

The fluid flows by static head downward through the balancing column, passing over the first two heating elements for gradual heating, and expands through the spreading device submerged in the water in the inverted cone bottom. The temperature required to break the film of oil surrounding the particles and grains of sand varies somewhat, but ranging between 170 and 200° F. in the warmest part of the unit, which is set up from data obtained by experimentation with the individual problem.

Sand and other foreign matter which separates from the oil as it passes through the body of water after heating and being expanded and broken into fine streams, settles to the conical section of the unit. Piping attached to the apex of the inverted cone permits removal of sand and accumulated water through control valves, directed to a more or less conventional sump constructed in one corner, or at one end of the area surrounded by the concrete firewall. Piping for water to flush the sand from the base of the vessel is attached to the shell of the vessel and to the sand dump line to assist in removing the sand, if it becomes more or less solidified. If no water is produced with the oil, this line is used to maintain the required level of water in the lower section of the vessel for adequate washing of the oil. Water level test cocks are usually installed on the vessel so the pumper may inspect at frequent intervals.

Clean oil is removed from the vessel at a point just below the top line of the central balancing column, and flows by gravity to gauge tanks for measuring and subsequent shipping to pipe lines. These tanks are usually installed in sufficient number to permit auxiliary settling while the oil is still hot, so any sand which is carried over with the oil may be removed before the oil is pumped out. Each tank is equipped with a bolted manhole at the base of the lowest ring for cleaning when an accumulation of foreign matter requires this operation.

Gasoline Demand Not Running As High As Expected

Market requirements in September and October smaller than estimated by Bureau of Mines. But plant output has been large, and stocks have prematurely increased.

By L. J. LOGAN, Associate Editor

ALTHOUGH the gasoline market so far has remained firm, following the price improvement of summer and fall, it has become increasingly doubtful if a strong market can be maintained consistently until next spring.

Lately, gasoline demand has not been measuring up to expectations, and output at the refineries has been even larger than the over-optimistic estimates would have justified. Consequently, whereas withdrawals from gasoline stocks would have been normal through October and into November, the inventories have been contra-seasonally expanding since October 1.

The gasoline situation has been complicated not only by the lagging of gasoline demand but also by the prevailing exceptionally large demand for fuel oils, which has induced record refinery runs and the unusually large gasoline production.

The lagging of gasoline demand has been reflected in the weekly statistics on gasoline production and on fluctuations of gasoline inventories. Those statistics have indicated that in October, total demand for gasoline, domestic and export, was only about 2.5 percent greater than the demand in October of last year. Such a year-to-year gain was below expectations. The Bureau of Mines had estimated that demand in October, 1939, would be 5.1 percent larger than that in October, 1938.

The market requirements averaged 1,638,600 barrels daily in October, 1938, and the Bureau of Mines estimated that in October of this year the demand would average 1,722,600 barrels daily, an increase of 5.1 percent. But actually, demand was only about 1,679,000 barrels daily. For in the four weeks from October 1 to October 28, gasoline production amounted to 48,508,000 barrels, according to American Petroleum Institute estimates; and that output was 1,492,000 barrels greater than current demand, as evidenced by a net addition of that amount to storage. The remainder of 47,016,000 barrels, representing market demand in the 28-day period, indicated average requirements of 1,679,000 barrels daily.

Similarly, gasoline demand had fallen below expectations in September, having been 4.8 percent greater than in September of last year, whereas the Bureau of Mines had forecast a 7.1 percent gain. Total demand in September, 1938, averaged 1,652,900 barrels daily, and the bureau estimated it would average 1,770,000 barrels daily in September, 1939; but the markets absorbed only 1,732,700 barrels daily, for production totaled 49,-

Changes from Year Ago in Stocks of Crude and Refined Oils

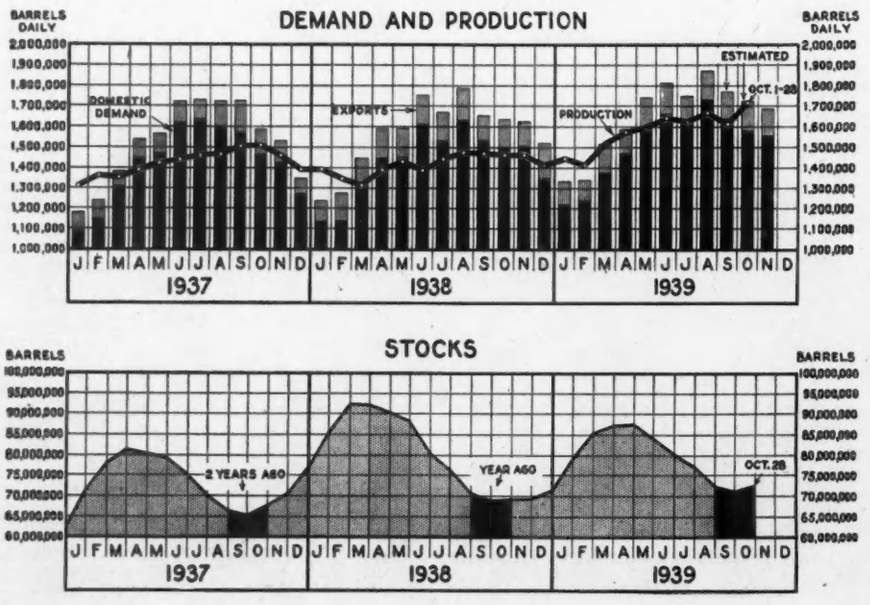
(Sources: Figures on refined products from American Petroleum Institute; those on crude stocks from Bureau of Mines).

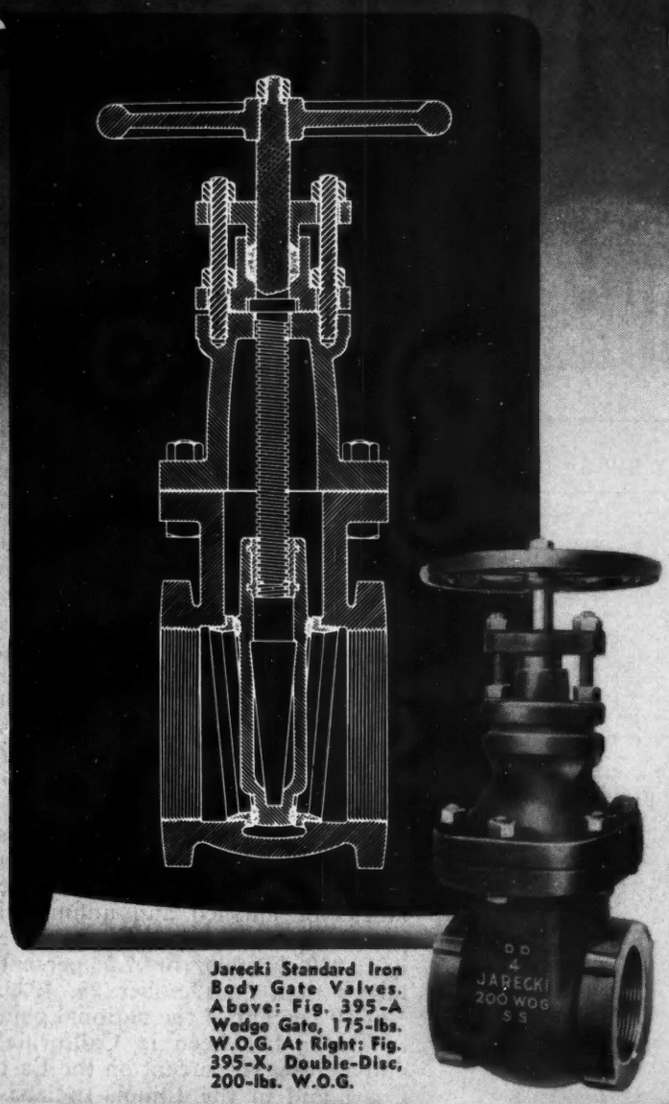
Barrels of 42 U. S. Gallons

United States Stocks of:	Oct. 29, 1938	Oct. 28, 1939	Percent Change
Gasoline....	67,590,000	72,660,000	+ 7.5
*Gas Oil and Distillate Fuels.....	32,739,000	31,073,000	— 5.1
*Residual Fuel Oil....	120,540,000	109,781,000	— 8.5
Crude Oil...	†276,652,000	‡229,127,000	—17.2

* At refineries only, except in California.
† Stocks October 22, 1938.
‡ Stocks October 21, 1939.

GASOLINE SITUATION





Jarecki Standard Iron Body Gate Valves. Above: Fig. 395-A Wedge Gate, 175-lbs. W.O.G. At Right: Fig. 395-X, Double-Disc, 200-lbs. W.O.G.

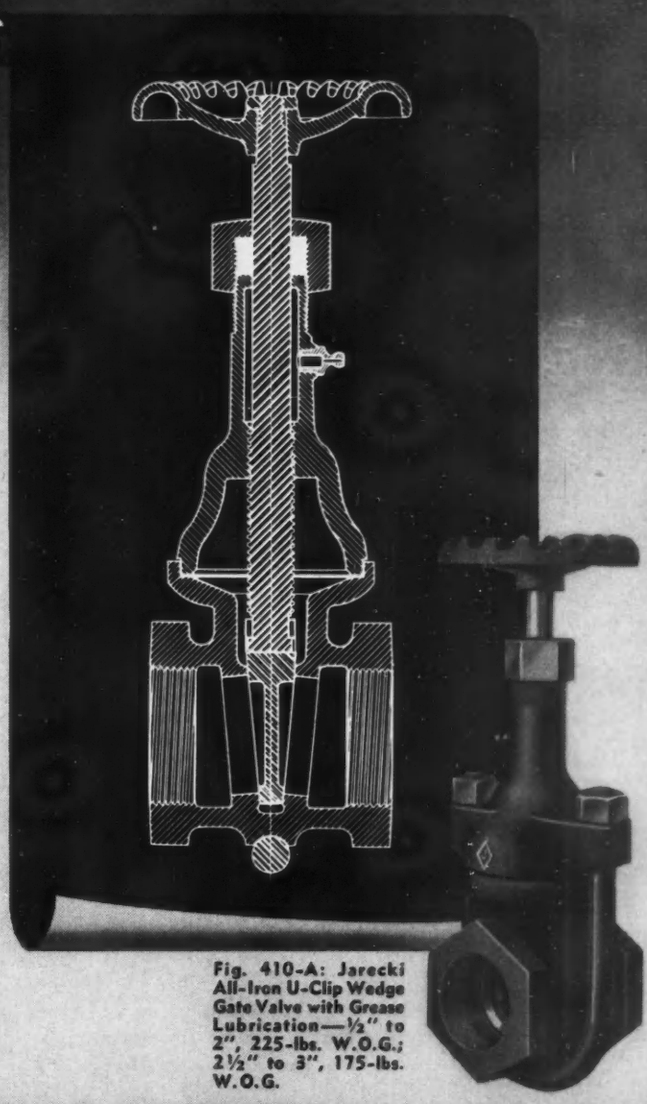


Fig. 410-A: Jarecki All-Iron U-Clip Wedge Gate Valve with Grease Lubrication—½" to 2", 225-lbs. W.O.G.; 2½" to 3", 175-lbs. W.O.G.

JARECKI ENGINEERS ARE VALVE *SPECIALISTS*

Valves—for all purposes—have been the backbone of the Jarecki manufacturing business since its founding in 1852. This means that the Jarecki engineering staff have largely specialized in valve design and manufacture for 87 years!

JARECKI Valves, Fittings and kindred items are thus not a development of a brief period, but have been perfected in every detail of design and materials as a result of the research, manufacturing and field experience of a competent engineering staff expended over many decades.

That JARECKI products have steadily advanced in sales volume over this long period, and have brought this company to a position of leadership in the valve and fitting industry—is proof positive of their "Time-Tested" quality and dependability.

Another Jarecki Store: KEENSBURG, ILLINOIS

WEDGE AND DOUBLE DISC GATE VALVES

All Iron
Iron Body Bronze Mounted

Semi-Steel
Semi-Steel Bronze Mounted

All Bronze
Bronze Body Nickel Disc

GLOBE VALVES

Iron Body Bronze Mounted

Nickel Seat and Disc

BALL AND SWING CHECK VALVES

IRON AND BRONZE COCKS

Jarecki

MANUFACTURING COMPANY

"Since 1852"

General Offices: St. Louis, Mo. Home Office and Factory: Erie, Pa., U. S. A.
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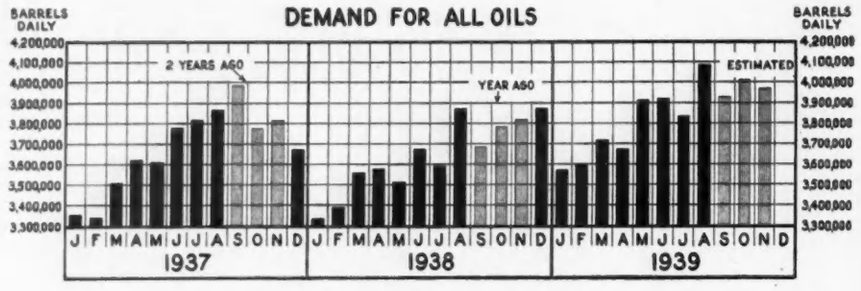
Branch Stores at All Important Places in the Oil Country.


DEMAND FOR ALL OILS
BARRELS DAILY
2 YEARS AGO
YEAR AGO
ESTIMATED
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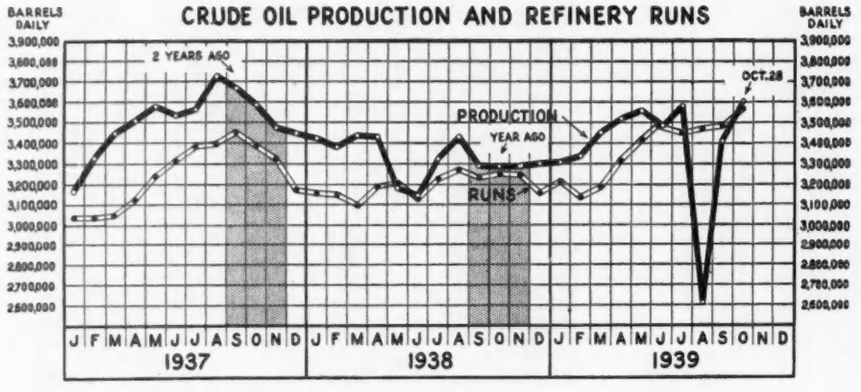
1937
1938
1939


CRUDE OIL PRODUCTION AND REFINERY RUNS
BARRELS DAILY
2 YEARS AGO
PRODUCTION
YEAR AGO
RUNS
OCT. 28
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1937
1938
1939

876,000 barrels and 2,106,000 barrels were taken out of storage.

In August, on the other hand, demand ran higher than anticipated, the requirements having been 4.9 percent greater than in August, 1938, whereas the Bureau of Mines had estimated only a 3.3 percent increase.

Although it remains to be seen how accurate the forecast will be, the bureau has estimated that the total demand for gasoline in November will be 3.9 percent larger than that in November of last year. Domestic consumption is expected to show a 3.8 percent gain, and the estimated exports of 3,900,000 barrels would be 5.5 percent larger than those of 3,698,000 barrels in November, 1938.

Whereas the nation's inventory of finished and unfinished gasoline was increased 1,492,000 barrels between October 1 and October 28, the Bureau of Mines had estimated that 1,000,000 barrels would be taken out of storage during the month.

In a few areas there were withdrawals from gasoline storage, but most districts showed additions, although the bulk of the accumulation occurred on the Gulf Coast, in the Oklahoma-Kansas region, and in California. The net changes from a month ago, and also from a year ago, according to American Petroleum Institute reports, have been as follows:

Region	Gasoline Stocks Oct. 28, 1939 (Barrels)	Change from Month Ago (Sept. 30 1939)	Change from Year Ago (Oct. 29, 1938)
East Coast	18,511,000	— 34,000	+1,429,000
Appalachian	2,611,000	+ 92,000	— 191,000
Ind., Ill., Ky.	10,771,000	— 160,000	+ 580,000
Okla.Kans.Mo.	6,129,000	+ 291,000	— 35,000
Inland Texas	1,495,000	— 10,000	— 28,000
Texas Gulf	9,539,000	+ 423,000	— 391,000
La. Gulf...	2,554,000	+ 441,000	+ 352,000
No. La.-Ark...	324,000	— 31,000	— 84,000
Rocky Mt.	991,000	— 71,000	— 62,000
East of Calif.	52,925,000	+ 941,000	+1,570,000
California	14,635,000	+ 411,000	+1,940,000
Reported	67,560,000	+1,352,000	+3,510,000
Estimated Unreported	5,100,000	+ 140,000	+1,560,000
Total U. S.	72,660,000	+1,492,000	+5,070,000

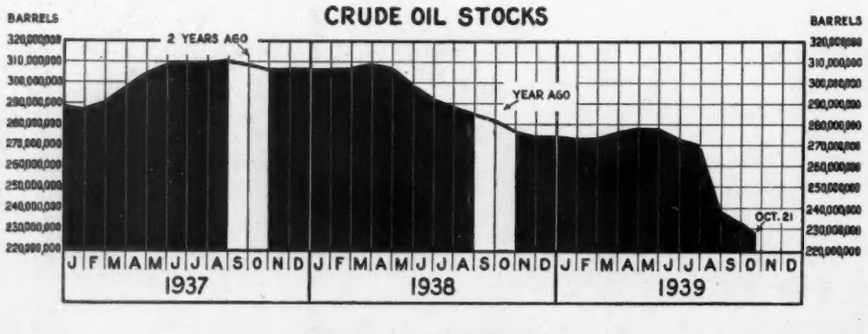
The comparison of present stocks with those a year ago reveals that a substantial gain is due primarily to increases on the East Coast, in the Illinois region, on the Louisiana Gulf Coast, and in California, stocks being smaller in other districts. Thus in comparisons both with a month ago and a year ago, substantial increases are shown by California and the Louisiana Gulf Coast.

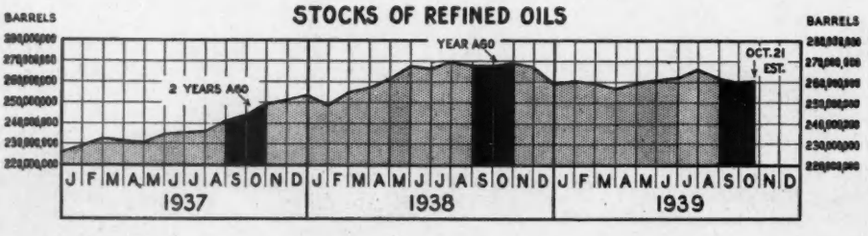
Having increased 538,000 barrels to a total of 72,660,000 barrels in the week ended October 28, the stocks of finished and unfinished gasoline in the United States were 5,070,000 barrels, or 7.5 percent larger than on October 29, 1938. But 40 percent of the national gain in stocks has been in California, and another 40 percent on the East Coast and in the Illinois-Indiana-Kentucky area. For the country east of California, in the aggregate, gasoline stocks are somewhat more than 1,500,000 barrels larger than at this time last year.

Whereas gasoline stocks, now 7.5 percent above the excessive levels of a year ago, are regarded by economists as about 10,000,000 barrels larger than necessary, the stocks of both light and heavy fuel oils are comparatively small.

Although gas oil and distillate fuel stocks were increased 204,000 barrels in the week ended October 28, they were on that date 5.1 percent smaller than at the comparable time last year. Yet demand has been more than 10 percent better this year than last year, with installations of new oil burners in homes and other buildings running high.

Stocks of residual fuel oils were reduced 274,000 barrels in the week ended October 28, as the nation's industrial activity continued at boom proportions; and the remaining inventory was 8.5 percent smaller than that held on the corresponding date last year, although demand for the heavy fuel oils has been around 10 percent greater in 1939 than in 1938.





CAMERON FLEX-SEAL

MUD VALVE . . . THE MUD VALVE THAT SWIVELS LIKE A UNION IN A MANIFOLD

ONE of several unique features of design employed by the Cameron Flex-Seal Mud Valve is the manner in which the hubs are attached to the body. A series of interlocking shoulders and grooves between the body and hubs permit the valve to swivel freely like a union by loosening the 4 body bolts.

ADDITIONAL FEATURES

1. Forged steel throughout; all parts subjected to wear are of heat treated alloy steel.
2. It is the only gate type valve without a metal-to-metal seal. The resilient insert*, which provides a pressure tight seat for gate, absorbs cutting action of abrasive-laden fluid and seals the two-piece valve body, can be replaced in the field with ordinary rig tools . . . in a few minutes.
3. Body may be quickly fitted with flanged, threaded, welded-on, or any special hubs desired.
4. Gate stem shows position of gate at all times and indicates the amount of wear on the resilient insert.
5. Available in 2", 3", and 4" sizes, 6000 lb. test pressure.

*2" size, $5.50; 4" size, $9.50.

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711 Milby St., Houston, Texas
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Oklahoma Representative: Paul Eddie, Tulsa

As We See It . . .

PUBLIC RELATIONS

THE advance program announcement of the coming annual meeting of the American Petroleum Institute reveals that more attention is being paid to public relations. It shows, too, that there is a tendency toward abandoning the gasoline tax question as the thing emphasized in presenting the industry's problem to the public. Apparently this subject is to be transferred to the motor clubs, the truck operators and other groups of consumers who, after all, really are the ones who pay the tax.

Perhaps it is beginning to be realized in some quarters that the public which knows from the sign on the pump that the tax is added there, is a little suspicious of the industry when it adds the total of that tax to its own tax burden. The public does not care what part of the cost of gasoline is tax so long as it gets gasoline at a reasonable figure, and there are plenty of figures available to show that, with tax added, this commodity still is to be had at low cost. Further, most of the wail about gasoline taxes being used for other than road purposes is wasted. The payer of the tax is no more interested in that than he is in what the oil seller does with his profits. It is immaterial to him whether the money goes for roads or old-age pensions, just as no one cares whether the industry's profits go to fighting hook worms or building tall buildings in New York—and that is where most of the public thinks the money goes. The latter is one reason why some good public relations work is necessary. Too much of the industry's effort to get public good will is directed to prejudice against a portion of the industry.

NOT that taxes on gasoline should not be opposed. This tax is a burden to the industry, but it is one burden where the customer bears the greater share and should be the one to fight it. With just a little encouragement, he will fight it, and will do it more readily and more effectively if the oil industry will stop claiming it is carrying all the load. Cigarettes, for instance, are taxed 50 percent or more of retail price, and that industry confines its propaganda to claims of quality of products and leadership in sales. Perhaps it is significant that while there are not so many as "20 big ones" in that industry, it gets scant notice from the law makers—and they have their proration problems, too.

THE trouble with the oil industry's public relations is that it continually is seeking public approval by being against something. This in spite of the fact that it has so much to commend itself with: the service it renders, low cost of that service, and the contribution it makes to good citizenship and general prosperity through the high wages it pays.

A GLARING example of harmful appeal to the public is the fight just coming to a close in California. An oil control bill is before the voters of that state after years of wrangling before the legislature. The law is patterned after some of the more conservative statutes that are in effect in other states, so reasonably it cannot be as heinous as is pictured by those who oppose it, nor can the opponents be so nefarious as pictured by proponents of its enactment. The question is of sufficient import, locally and nationally, that even the President has dipped in an oar, and precedent has been broken by the Army and Navy to comment officially on an election. But even all that importance does not justify the thousands of dollars the two factions of the oil industry have spent in calling each other names. Regardless of how the election goes, both sides lose, because the public will believe what has been said about either one or the other faction, and will be suspicious of both.

Something along the same line is in the offing in Illinois. It is almost too much to hope that the contestants there may rely on the righteousness of their claims rather than appeals to prejudice and vilification.

ALWAYS an industry's most potent apostle of good will is the individual who contacts the public as the industry's representative. Most units and individuals in the oil industry realize this and act accordingly. As a result they have an enviable reputation in points of concentration as good citizens and good neighbors, leaders in all movements for the public good. Propensity for bringing industrial controversies out for public airing, however, tends to offset this. Strife, it seems, is unavoidable, but it could and should be done more quietly. And before any tribunal, reasonable and sensible argument is more effective than calling of names.

—J. K. R.

ANOTHER PROBLEM···

Licked by Westinghouse

DEVELOPMENT OF EXPLOSION-RESISTING MOTORS IN RATINGS UP TO 1,000 HP AGAIN PROVES ABILITY OF WESTINGHOUSE TO MEET REQUIREMENTS OF PETROLEUM INDUSTRY

• • •

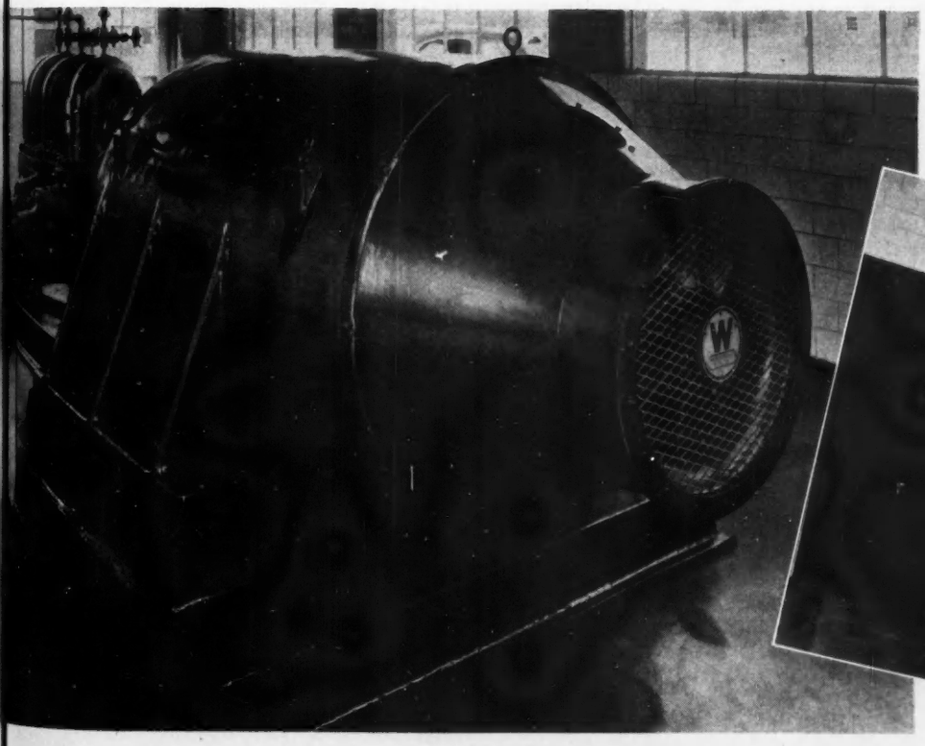
UP to now, design of large motors for pumping operations in hazardous locations has been a serious problem. Forced ventilated motors have met with the difficulty of obtaining safe air. Water-cooled, inert-gas filled motors, while satisfactory under some conditions, need many accessories, which complicate operation and maintenance — and bring danger of abnormal shutdowns.

NEW WESTINGHOUSE DESIGN SOLVES THE PROBLEM

In July 1939, Westinghouse delivered to Shell Oil Company three 500 hp and two 600 hp newly designed explosion-resisting motors for pipe line service. These use the dual ventilated frame long proved satisfactory in other Westinghouse explosion-resisting motors. They require no auxiliary apparatus, even the bearings being self-lubricating ring oiled. Complete independence of gas, air or water supply makes for new simplicity, dependability and safety. And — they are now available in ratings up to 1,000 hp, 3,600 rpm.

EQUIPMENT TO FIT YOUR NEEDS

Whether you operate pipe lines electrically, with steam or with internal combustion engines, Westinghouse has step-up gearing, turbines and motors to meet your requirements. Whatever your power needs may be, your local Westinghouse office or supply house can serve you quickly and capably. Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.



Left — New Type 500 hp explosion-resisting motor, on Shell Oil Company's 350 mile gasoline line from Woods River, Illinois, to Lima, Ohio. Capacity — 22,000 barrels per day, 8" pipe. One of 7 similar Westinghouse motors from 200 hp to 500 hp in 5 stations on this line.

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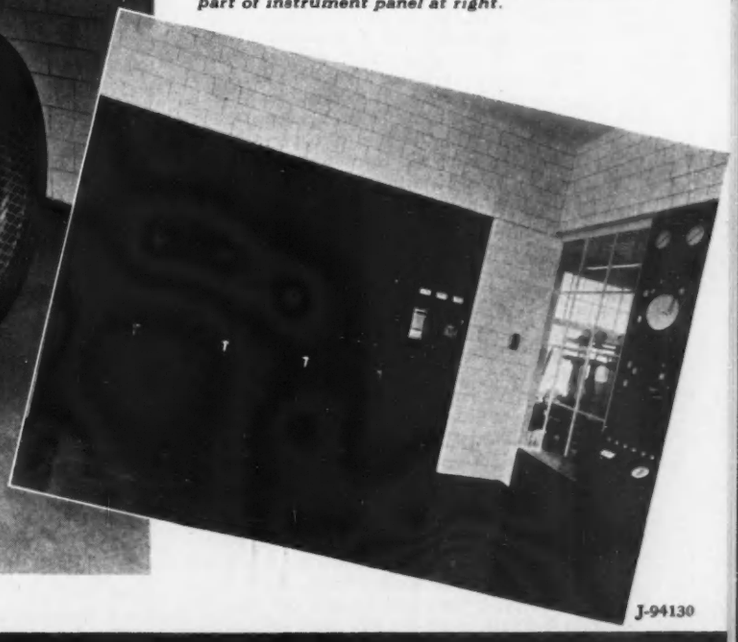
Below—Westinghouse dead front switchboard, with part of instrument panel at right.



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Westinghouse

WESTINGHOUSE ELECTRIC

ELECTRICAL PARTNER OF THE PETROLEUM INDUSTRY

Roumania's Oil Lessens Chances for Neutrality

WITH Germany's demands on Rumania for more oil and Bulgaria's demands on Rumania for more land, the chances of Rumania keeping out of the war long appear somewhat poorer than they did a month ago. Recent actions of the Rumanian government are not calculated to change the outlook.

Regardless of what seems to be an obvious policy on the part of both western front armies to more or less loaf along pending results of the diplomatic duel between the Chamberlain-Deladier and Hitler-Stalin teams, it is fairly safe to predict that use of force by Germany to obtain from Rumania what she wants would immediately set off the fireworks along the Maginot-Siegfried line in a big way.

As things stand, Rumania probably could offer less armed resistance to German invasion than Poland did, but her natural resources and agricultural assets probably would be much more likely to generate a shoot first and talk later policy on the part of Britain and France than did those of more remote Poland. An annual crude production of better than 56,000,000 barrels is a stake worth playing for. Couple this with the fact that Rumania has refineries far superior in capacity, and possibly in modernity, to those of Poland, and the value of the stake is enhanced. Disregarding wheat, beef, raw minerals and other assets of King Carol's kingdom, that oil will draw Rumania into war is almost inevitable. Recent reports of Russian mechanized units squeaking, rattling and crying for grease do not alleviate the situation so far as Rumania is concerned.

Thoughts of what Rumania would mean to either side bring to mind countries ranking comparably from a statistical standpoint, such as Iran. While one does not know who will get the benefit from Rumania's 56,000,000-barrel annual yield, neither can one be certain that England and France will be able to utilize the full amount of oil Iran exported before initiation of hostilities. Iran exported 67,312,000 barrels of petroleum products last year, according to the Banque Mellie of Teheran. This amount was split up as follows: crude oil, 2,910,000 barrels; motor gasoline, including aviation gasoline, 17,492,000 barrels; kerosene, 4,724,000 barrels; gas oil and heavy oil, 4,941,000 barrels; fuel and Diesel oil, 37,245,000 barrels.

So, for a fighting nation, Iran would seem somewhat juicier a plum than Rumania provided she were not so far from the battlefields. But, oil from Iran is subject to the hazards of Mediterranean sea transportation enroute the nearest points of delivery to either France or England, a situation rendering Italy a less impotent ally or enemy for either side.

Along this line of thought some have been curious as to just what Germany got in the way of oil by conquering Poland that she was not already getting. Following is a list of Polish petroleum exports to countries listed as neutral or non-sympathetic with the Nazi drive, figures in barrels: gasoline, 38,000; gas, transformer and solar oils, 1000; lubricating oils, 10,000. The following Polish exports in 1938 to neutrals or German non-sympathizers are expressed in pounds: lubricating grease, 4000; crude paraffin wax 22,000; refined paraffin wax, 7,482,000; other mineral wax, 649,000; asphalt, 1,033,000 pounds.

Just what Germany was importing in the way of crude and refined petroleum products before war was declared is shown in the accompanying table, which compares importations of the first half of last year against those of the first half of this year:

German Imports of Petroleum Products

Product—	First Half of 1938 (U. S. Bbls.)	First Half of 1939 (U. S. Bbls.)
Crude petroleum	2,551,000	3,821,000
Gasoline	4,951,000	5,554,000
Kerosene	91,000	134,000
Gas and motor oil	4,395,000	5,884,000
Lubricating oils	1,294,000	1,225,000
Fuel Oil	976,000	2,333,000
[1]Crude ozokerite	3,721,000	2,476,000
[1]Refined ozokerite and ceresin	236,000	215,000
[1]Crude and refined paraffin	10,426,000	12,724,000
[2]Petroleum asphalt	4,325	6,559
[2]Solid, natural asphalt	2,305	3,348

From the foregoing it will be seen that there was a definite increase in importations of crude oil, gasoline, kerosene, gas and motor oil, fuel oil, crude and refined paraffin, petroleum asphalt and solid, natural asphalt. To what extent these increases anticipated expected military needs is problematical.

During the first half of the year England may be said definitely to have been anticipating the possibilities of a war against Germany. That she was not greatly concerned at least not to the point of sensationally increasing her imports, about being able to protect routes along which oil products would have to be carried from her usual sources of supply is reflected in the accompanying table showing United Kingdom imports of petroleum products during the first half of 1939 as compared with those of 1938:

United Kingdom Imports

Product—	First half of 1938 (Barrels)	First half of 1939 (Barrels)
Crude oil	8,609,000	8,875,000
Gasoline, motor spirit	20,360,000	22,975,000
Gasoline, other spirit	311,000	295,000
Kerosene	3,210,000	3,040,000
Gas oil	2,311,000	2,722,000
Fuel oil	11,395,000	8,638,000
Lubricating oil	1,742,000	1,744,000
Other mineral oils	28,000	13,000

In addition to the foregoing, United Kingdom imported 42,804,000 pounds of paraffin wax in the first half of 1938 as against 49,109,000 pounds in the first half of this year. Asphalt and bitumen imports during the first half of last year were 39,128 metric tons, compared with 46,554 tons the first half of 1939. Imports of bituminous asphalts and emulsions brought in the first half of 1938 totaled 35,499 tons as against 13,341 tons the first half of this year.

It is interesting that none of the crude oil imported by Great Britain came from Russia or Germany, though Russia did furnish 622,000 barrels of motor spirit gasoline and 91,000 barrels of kerosene to the United Kingdom in the first half of this year.

Russia, of course, long has remained the second most important producer of crude oil in the world, but efforts to obtain satisfactory figures on imports and exports have not been successful on the whole. That the Soviets have an abundance of certain types of petroleum products is well known. What they can furnish in the way of lubricants and gasoline of high octane rating for fueling air fleets is not known, though the general assumption is that lack of facilities for manufacturing these two products constitutes a vulnerable characteristic of the socialists' fighting machine. However, it might be pointed out here that last year Russia exported the following: gasoline, 2,862,000 barrels; kerosene, 501,000 barrels; lubricating oils, 822,000 barrels, and fuel oil, 2,731,000 tons, according to J. W. Finch, director of the United States Bureau of Mines. Russia's asphalt exports last year, according to LaRevue Petrolifere, totaled 1,823,000 tons.

Weighing the advantages of petroleum reserves strictly within the immediate borders of the belligerants, the foregoing figures do not contradict the fact previously pointed out in these columns that Germany and Russia have the edge on Britain and France. If we weigh the advantages of reserves available from nations friendly to the democracies, they substantiate the argument that England and France are better equipped to fight a long war so far as oil is concerned.

[1] Figures in pounds; [2] figures in tons.

HIGHLIGHTS IN THE WEEK'S NEWS

Allowables

Texas wants higher demand estimate from bureau

Declaring that refineries dependent on Texas oil were facing a shortage of crude supplies, and unless an increased allocation was obtained a good many plants would have to shut down, Chairman Lon A. Smith, and Jerry Sadler, member, of the Texas Railroad Commission were in Washington last week attempting to get the Buerau of Mines to increase its estimate of Texas' market demand in November by 400,000 barrels.

Later, the two commissioners admitted they had not received much encouragement for an increase in November estimates, but that the next estimate of the Bureau of Mines probably would give Texas an increased demand estimate.

Claims Heavy Exports

They pointed out that the increase asked represents the amount of Texas crude moving into export. Smith and Sadler held that heavy movement of oil to warring countries in Europe was creating the shortage, and that the Bureau of Mines did not know of this volume when it prepared its November forecast of 1,444,000 barrels for Texas. However, Sadler explained that their request was based on the total oil moving out of the state, it being impossible to determine how much of the outbound oil was destined for Atlantic Coast refineries and how much was found for European ports.

The proposed increase was made in conference between the commissioners, Secretary of the Interior Harold L. Ickes and John W. Finch, director of the Bureau of Mines.

Sadler and Smith explained that while they have the right to fix the allowables for Texas, they wish to keep the state within the limits of the bureau estimate of demand.

Visits Roosevelt

Later Comissioner Sadler discussed the oil situation, particularly gasoline stocks and transportation problems, with President Roosevelt.

Following this meeting, Sadler asserted he expected a greatly increased demand for crude oil when the new neutrality bill becomes effective.

"The problem," he continued, "will be to find ships to transport it. About 28 percent of the tankers afloat today fly the American flag, and these ships will not be available (under terms of the measure) for carrying American oil to the warring countries."

Sadler said the president called his attention to the fact that gasoline stocks are piling up rapidly, and he explained that this was due to a speculative situation, with "speculators piling up stocks of gasoline against an expected heavy demand." These stocks, he said, were being accumulated along the Atlantic Seaboard, and that this movement together with export shipments is "what is producing a shortage in Texas."

"We need about 400,000 barrels a day additional to keep our own refineries in operation," Sadler stated.

Texas increased allowable plead causes speculation

Texas' plea for increased production directed speculation in Washington along two channels, one the effect increasing war demand will have on the administration's conservation program, as embodied in the Cole bill on which hearings begin this week (see page 44), and the other on the possibility of concessions to Venezuela crude in the proposed reciprocal trade agreement with that country.

In view of statements made before the Temporary National Economic Committee last month that rigid application of conservation principles probably would reduce production to a point below domestic demand, there was considerable conjecture as to the possible fate of the Cole bill, which has as its aim the development and enforced imposition of standards far more severe than any adopted by the states in their respective conservation laws.

On the other hand, there was seen a possibility that the administration might be able to reconcile the situation by enacting the Cole bill and encouraging imports by reducing the present excise tax, a step which it is said is highly favored by the state department as an inducement to Venezuela and Colombia to grant concessions to American products in a reciprocal trade agreement.

Even aside from the situation created by the drain upon the United States resources by increased war demand, it has been suggested, the freer importation of oil would aid conservation. It is generally believed in Washington that if the Allies look to the United States for their oil supplies during a long war there is serious danger that domestic refineries would not be able to secure enough to meet the nations own consumptive demand. If foreign oil buying assumes real war proportions it is probable that other producing states will ask for increases in their allowables.

Contrary to Needs

Either of these actions, passage of a control measure that would curtail United States production below domestic consumption, or permitting increased imports, would be contrary to the needs of the American oil industry, which is struggling with a steadily growing volume in excess of daily market demand. Due to present proration restrictions the average output of wells in the nation has declined steadily year by year, despite the discovery of more oil than produced, and now is at a point where investment returns are so slow that many predict a drastic curbing of drilling operations. U. S. oil men have been hoping that increased war demand would permit some relief from low production allowables. Meanwhile, figures fail to show any evidence of a material increase in exports since the start of the European war.

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Control

Cole committee to hear government representatives

With the Temporary National Economy Committee investigation of the oil industry concluded, the oil subcommittee of the House Committee on Interstate and Foreign Commerce, headed by Representative William P. Cole, Jr., of Maryland, will begin hearings November 6 on the Cole bill providing for joint state and federal oil production control.

The hearings are planned to be concluded within the week, and testimony will be taken only from federal officials, the industry to be given its opportunity to present its views at another series of hearings to be held during the regular session of Congress which convenes in January.

A tentative schedule drawn up by

Chairman Cole calls for the appearance on November 6 and 7 of representatives of the Bureau of Mines and the Geological Survey, with Secretary of the Interior Harold L. Ickes to testify November 8, and representatives of the Army, Navy and National Resources Planning Board to be heard November 9 and 10.

From the inclusion among the witnesses of Army and Navy officials, it is inferred in Washington that the national defense aspects of the oil situation may be stressed by the Administration in pressing the proposed legislation.

While the subcommittee's plans now call only for the one week of hearings, it was indicated that hearings may later be held in Illinois and Louisiana.

Members of the oil group attended some of the sessions of the TNEC as observers, and an analysis has been made of the testimony on production given during the monopoly probe, so that the subcommittee may avoid going over the same ground.

The Cole bill, written in the Interior Department and introduced at the request of President Roosevelt during the last regular session of Congress, would give the federal government a large measure of control of the oil industry through its provisions that standards of waste shall be developed in Washington to be applied by the producing states under threat of having their shipments in interstate commerce cut off. The measure has been attacked by a number of state oil officials and, it is expected, will be bitterly fought when brought up for consideration.

Illinois urged not to adopt control hastily

With the declaration that he had not been informed whether oil control would be included in the expected special sessions of the Illinois legislature, and that he had not seen a draft of the proposed oil bill (THE OIL WEEKLY, October 30, page 48), Hugh W. Cross, speaker of the lower state house, last week urged that no measure be adopted hastily.

"It is evident," Cross said, "from the history of oil production in other states that many mistakes have been made. Now that the European war has thrown the spotlight upon the importance of petroleum products in national defense, we must not let the legislature nor the administration be stampeded into hurried and ill-advised action. We must strive to avoid mistakes made by other states and the legislature must be given ample time to study and weigh the needs of the industry, the rights of the people, and the effects of any legislation.

"After all," the speaker concluded, "legislation will come from the legislature and not from any individual group. Therefore, any steps taken to supervise and control the industry, and to derive revenue from it, must consider all its branches—the producers, the refiners, and the pipe line companies."

Meanwhile, the recently organized Illinois Oil Producers Equity Association continued its campaign against the conservation measure advanced by 3 older state groups, the Illinois Independent Oil Producers Association, the Petroleum Association of Illinois and the Illinois-Indiana Petroleum Association. (See this issue, page 6.)

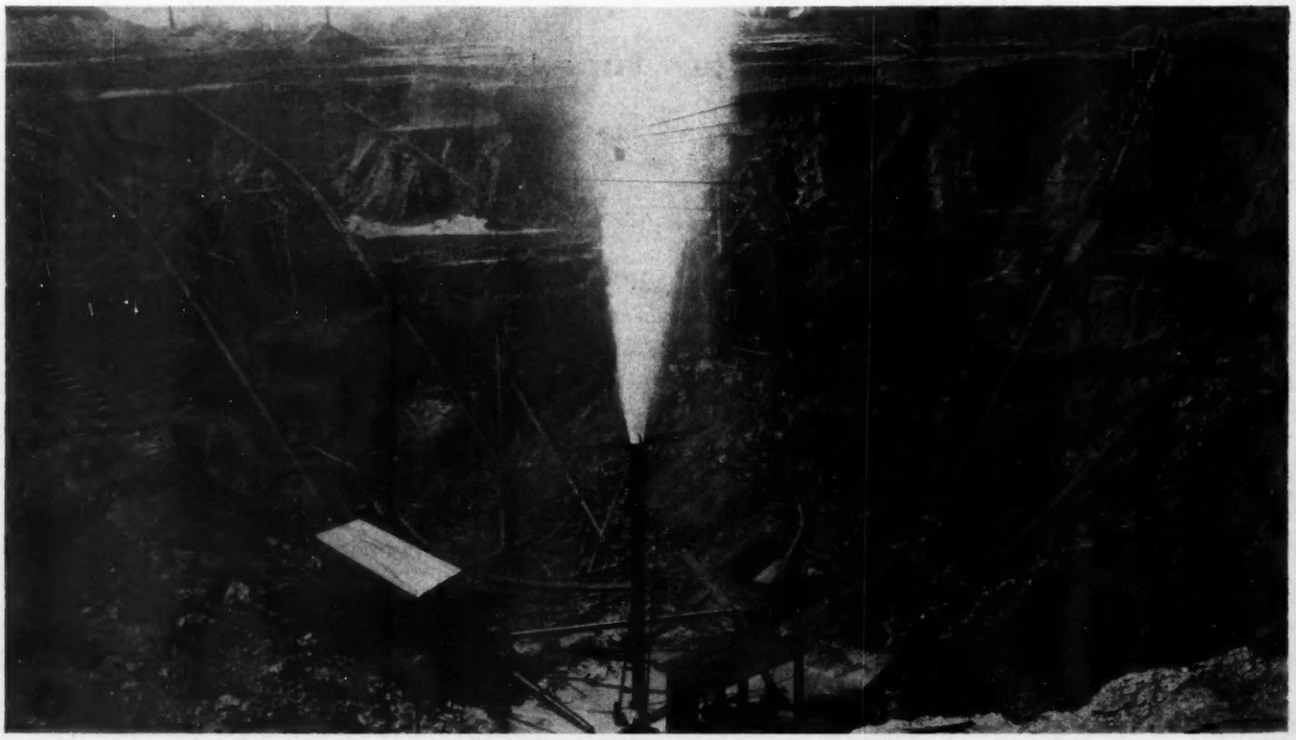
Called Dictator Act

In a letter to the legislature's Budgetary Commission, George Harsh, Jr., Centralia, president of the new organization, called the proposed act an instrument to "create a virtual dictatorship of the oil industry."

"The oil industry in Illinois has continued to stabilize since adjournment of the legislature last June 30, and it is operating most orderly and with a minimum of waste," Harsh said. "The last legislature refused to pass any oil control or so-called conservation laws, and certainly no crisis has arisen since. For that reason we feel confident Governor Horner will not include any oil control legislation in his call for a special session of the legislature."

The commission, headed by Rep. Reed F. Cutler, Lewistown, had asked

Hope to Control Greta Wild Well



National Petroleum Company's Missouri Pacific 1, which blew out and cratered in the Greta, Texas, field on June 28, 1938, has been one of the most troublesome wells on record. The crater almost immediately destroyed the main highway and railroad rights-of-way, and kept blowing material until it formed a crater about 300 feet across and 50 feet deep. It has been blowing salt water and gas since the first blowout, and efforts to bring the well under control have been unsuccessful. Two relief wells were drilled to kill the well, but they failed to contact the area causing the trouble. The highway and railway use detours to avoid the wild flow. A small rotary machine may be seen at the bottom of the crater. The flow of water and gas is temporarily diverted through the large joint of pipe shown, the pipe being supported by a wire cable across the top of the crater. Experts are now engaged in milling and fishing to contact the top of the casing near the surface, and hope to make a permanent connection that will bring the well under control.

the Equity association to submit a substitute program for oil legislation. Harsh said that more time would be needed.

"We seriously doubt the wisdom of even attempting to inaugurate an oil control program," he added.

Courts

Products of exported crude must pay tariff to get back

Foreign oil companies purchasing crude petroleum in the United States for shipment to and refining abroad cannot return the residue to this country without payment of tax imposed under the Revenue Act of 1932, it was held October 30 by the United States Court of Customs and Patent Appeals.

The court's decision was rendered on an appeal by Shell Oil Company of Canada, Ltd., for a similar judgment of the United States Customs Court overruling its protest that the material should be exempt from tax as "American Goods Returned," under Paragraph 1615 of the Tariff Act of 1930.

The case involved 81,000 barrels of residue imported into the United States in 1936, but the issue, it was said, involves quantities of residue from Canadian refineries which would be brought into this country if the company's contentions had been upheld.

The basis for the decision was a ruling that the free entry of American goods returned was dependent upon its return as the same merchandise originally exported. The residue involved, it was held, was a new product.

Government suit over island bears on title to shore area

Indications that the issue of ownership of the California submerged oil lands is nearing a head were seen in Washington last week in the disclosure that, in addition to the plea of the Navy Department, the Interior Department has sent to the Attorney General a lengthy report on Reeves field, an artificial island off the coast of Los Angeles, sought by the Navy as an air base.

The report, it was said, was written by Nathan R. Margold, solicitor of the Interior Department, who has been working on the matter for some time.

Any litigation brought by the Department of Justice to determine whether title to the land and any oil which may lie thereunder belongs to the United States will be brought by Norman N. Littell, assistant attorney general in charge of the lands division.

There appears to be no question over acquisition of the surface land by the Navy Department, a state election having approved the granting of the land for an air base, but the state is desirous of retaining rights in any oil which may be found on the property.

It is pointed out that if a suit is brought against the state to determine the government's rights to oil deposits which may underlie the proposed air base, a decision favorable to the government would pave the way for action to take over all the California submerged oil lands.

PIPE LINE NEWS

Gulf to increase West Texas pipe line capacity

Gulf Refining Company will increase capacity of its West Texas trunk line from 55,000 to 63,000 barrels daily through installation of an extra pumping unit at 8 booster stations and addition of short 10-inch loops on the discharge end of each. Contract for the laying the loops will be awarded in time to start initial work by mid-November.

The enlarged capacity will be provided east of Judkins station, Ector County, involving a 15-mile loop. A 5-mile loop will be built east from Midland station and tank farm, while the remaining loops will average about 3 miles each at Coahoma, Roscoe, Clyde, Ranger, Weatherford and Grandview stations.

The extra pumping units will consist of 500 horsepower Diesel engines and 25,000-barrel capacity plunger type pumps.

Wasson-Bennett outlet capacity being increased

Humble Pipe Line Company is stepping up capacity of its 6-inch line that connects the Wasson-Bennett district, West Texas, with its Hobbs, New Mexico, carrier from 12,000 to 17,000 barrels daily through installation of a loop and a section of larger pipe. The project calls for replacement of 5.6 miles of the original line near the Hobbs end with 8-inch while an equal length 6-inch loop will extend toward Wasson station. This extra capacity is needed to forestall pipe line prorations as production is climbing rapidly due to a large quota of completions each week.

Building line from Saxet to Jim Wells County

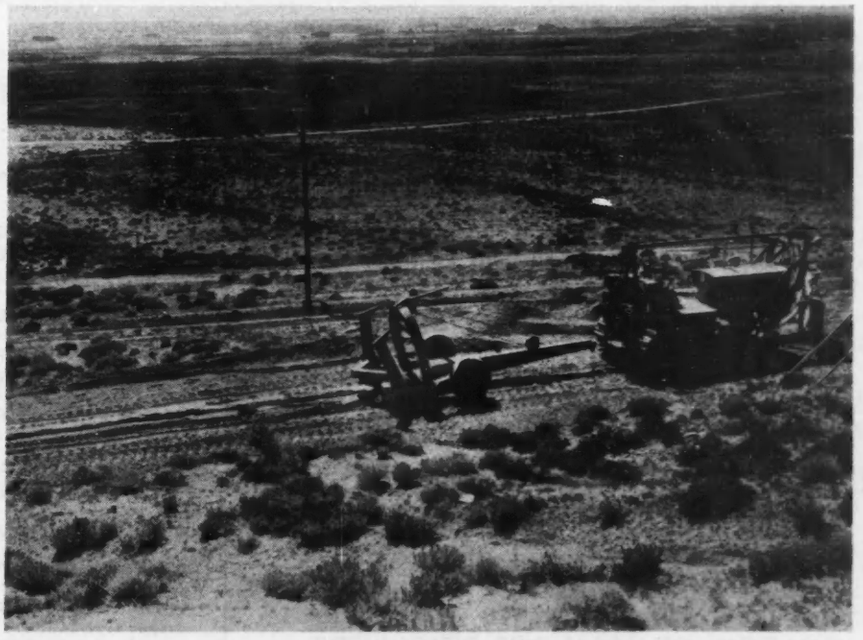
M-A-R Pipe Line Company of Corpus Christi has let contract for materials for pipe line from the Saxet field to Jim Wells County.

The company will lay a 35-mile extension from its Saxet field line to the Ben Bolt, Alice and East Alice fields in Jim Wells County. There will also be 10 miles of 4-inch gathering lines laid in addition to the main 6⅝-inch main line.

Construction is to start in the next few days, to be in operation by December 1 to 15.

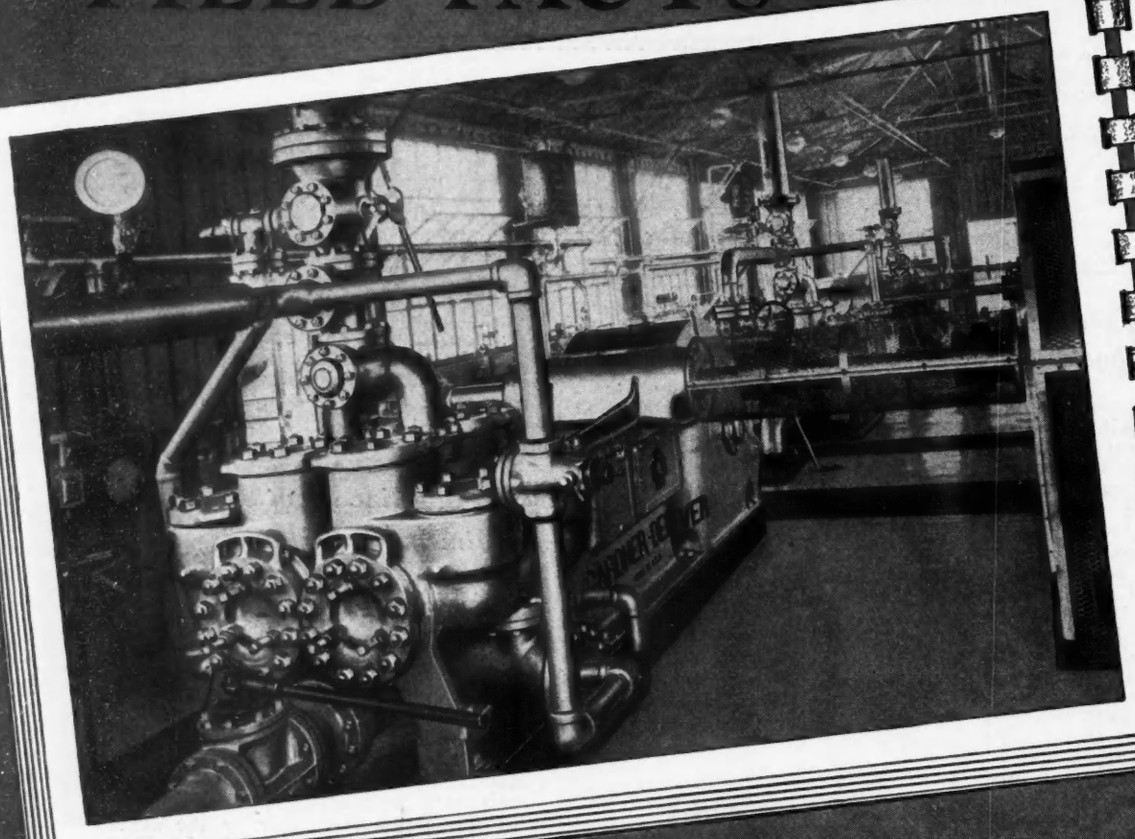
In addition to Saxet crude the company also takes oil from the Turkey Creek field, 10 miles west of Corpus Christi.

Rooter Used to Break Hard Shale



When Williams Bros., contractors on a section of Utah Oil Refining Company's 492-mile pipe line being laid from Ft. Laramie, Wyoming, to Salt Lake City, encountered exceedingly hard soil conditions, they used a rooter pulled by a 97-horsepower Diesel engine powered tractor to break up the hard shale and clay ahead of the ditching machine. This photograph of the rooter and tractor, which worked 8 hours daily on a little over $2 worth of fuel, was taken near Fort Bridger, Wyoming, at an elevation of 6000 feet.

FIELD FACTS . . .



For Instance

"Maintenance costs are negligible," say the owners of these Gardner-Denver 6¾ x 16 pumps installed in a southern Illinois pipe line pumping station. Yet the pumps have been in continuous 24-hour operation for well over a year. "Completely satisfied," report the owners.

Show Why It Pays YOU to Choose GARDNER-DENVER PIPE LINE PUMPS

EXPERIENCE is a sure guide in making the right choice of pipe line pumps. And experience throughout the country—under toughest operating conditions—shows why Gardner-Denver Pipe Line Pumps are your logical first choice. Here are pumps that keep working 24 hours a day—day after day—with never a hint of trouble . . . never a suspicion of high maintenance cost . . . never a let-up in their smooth, unfailing power.

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THE GARDNER-DENVER LINE INCLUDES 4 x 6, 5 x 10, 5½ x 12, 6 x 14, 6¾ x 16 AND 7¾ x 20. ANY OF THE ABOVE SIZES CAN BE FURNISHED WITH VARIOUS COMBINATIONS OF LINERS AND PISTONS FOR A WIDE RANGE OF CAPACITIES AND PRESSURES.

FEATURES OF THE "FX" DUPLEX POWER PUMP

- **Interchangeable liners and pistons give wide range of capacities and pressures.**
- **Exceptional accessibility—liners, pistons and rods can be changed without opening crankcase, keeping dust and dirt out of working parts.**
- **Automatic, positive flood lubrication to working parts—reliable always—no oil pipes, no tricky adjustments.**
- **Oil-stop and fluid-stop heads completely and positively prevent entrance of crude oil or water into power end.**
- **Continuous tooth-type herringbone gear and pinion—quiet, durable, efficient.**
- **Timken tapered, adjustable main bearings—Hyatt roller jackshaft bearings—pinion shaft floats in accurate alignment with main gear.**
- **Gardner-Denver Divided Fluid End construction.**
- **Alloy iron fluid end—tested to 3000 lbs. hydrostatic pressure.**
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MEN IN THE INDUSTRY'S NEWS

DALE DORN, vice president of Forest Development Corporation, is in charge of the company's offices which have been opened in the Milam Building in San Antonio. The offices had been moved from Abilene and were maintained at a different location temporarily. A branch office will be maintained in Midland, with Robert Dickey in charge. Gene F. Boehms is chief geologist, J. C. Artley is in charge of the land department and Carm Ruzzuti is auditor and head bookkeeper. The company is starting a development program of oil properties in Southwest Texas.

W. M. GRIFFITH of Sinton, vice president of Plymouth Oil Company, is spending several days in Sweetwater, where the company is drilling a wildcat.

NATE ISENBERGER and H. K. Greenleaf, division geologist and landman, respectfully, for Phillips Petroleum Company in Corpus Christi, are in Bartlesville on business.

HENRY M. GILBERT, of Eldorado, Arkansas, has been appointed production superintendent for Bay-Tex Oil Corporation and S.E.W. Oil Corporation. He formerly was manager of U. S. Oil & Refining Company of New Orleans and was manager of the Tri-State Refineries at Eldorado for 10 years. He has also been engaged in production and drilling work.

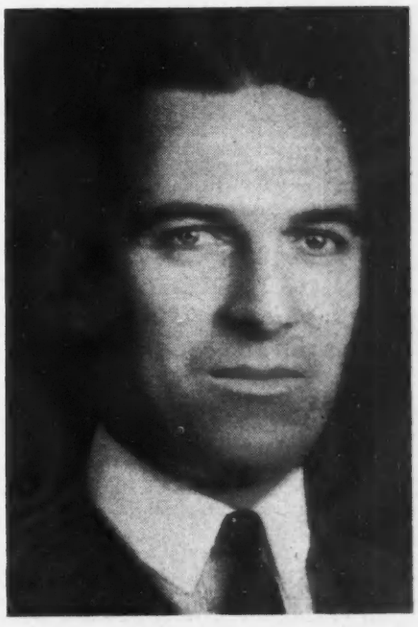
EDWARD L. SHEA RESIGNS VICE PRESIDENCY OF THE TIDE WATER ASSOCIATED OIL COMPANY TO HEAD UTILITY CONCERN

EDWARD L. SHEA, executive vice president of Tide Water Associated Oil Company, has left that position to accept the presidency of North American Company, second largest public utility holding company in the United States.

The announcement of the change came from New York, where both companies have headquarters. Following acceptance of Shea's resignation William F. Humphrey, president of Tide Water, announced that the vacated post had been abolished. Shea, however, will continue as a director of the Tide Water Company.

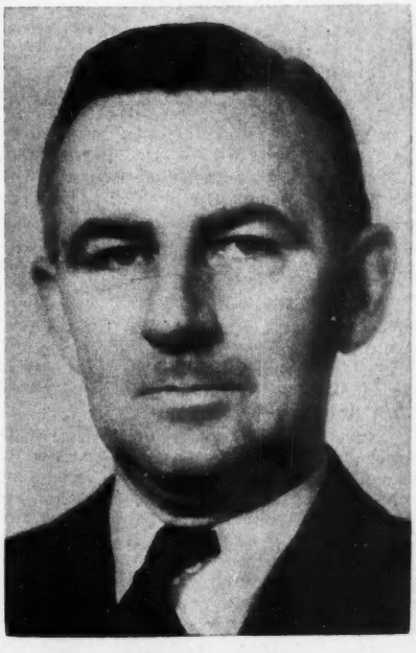
Born in Nashua, New Hampshire, on November 4, 1892, Shea was trained as a civil engineer at Princeton University. Upon graduation in 1916 Shea went directly to the old Tide Water Oil Company for work in their Bayonne refinery. After two years in the sales division and two years in Mexican fields, Shea was recalled to New York and placed in charge of crude oil purchases. In 1923 he became assistant to the president, and then in order; vice president in charge of manufacturing, vice president in charge of sales, and executive vice president.

In 1933 Shea became president of Tide Water Oil Company, and in 1936, when the company was merged into Tide Water Associated Oil Company, he became executive vice president and director of the latter organization.



EDWARD L. SHEA

CONTINENTAL PROMOTES W. H. O'CONNOR AND GEORGE W. EVANS



W. H. O'CONNOR

GEORGE W. EVANS

APPOINTMENT of W. H. O'Connor to director of purchases and George W. Evans to general purchasing agent for Continental Oil Company was announced last week by President Dan Moran.

O'Connor has been the company's general purchasing agent for the past 20 years, and Evans has been assistant general purchasing agent for the last 15 years.

FREDERICK G. CLAPP has been making a study of the oil possibilities in the Forest City basin of Missouri and adjoining states. On October 20, at the University of Iowa, he gave an illustrated lecture on Afghanistan.

W. S. (BUCK) MORRIS, field chairman of the East Texas Engineering Association, is back at his Kilgore, Texas, headquarters after a week in Wilmington, North Carolina, because of the death of his father.

T. E. CHAPPELL, who has been in Gulf Oil Corporation's land department at Corpus Christi for several years, is visiting his home in Florida. From there he will go to New York and catch a tanker to South America, where he is to become affiliated with the land department of Mene Grande Oil Company in Eastern Venezuela.

D. D. THOMAS, president of Thomas Drilling Company, has transferred headquarters from San Angelo, Texas, to Artesia, New Mexico, as result of the firm booking contracts in Eddy County fields for its 3 strings of tools.

T. J. FREEMAN, head of the land department, Fort Worth division, for The Texas Company, visited in New York City late in October.

DR. FREDERICK W. LEE, head of the geophysical division of the United States Geological Survey, Washington, delivered a lecture at Fort Worth November 1 un-

der the auspices of the Fort Worth Geological Society. He spoke on Governmental Activities in Geophysical Prospecting.

GEORGE CASEY, Republic Pipe Line Company superintendent at Corpus Christi, has returned from a two-weeks vacation spent visiting the World's Fair at New York.

HENRY A. LEY, of San Antonio, Texas, president of the American Association of Petroleum Geologists, was guest speaker at the Illinois Geological Society on October 26. He spoke on "A Return to Dynamic Prospecting."

JOE HOARD, president of Hoard Exploration Company, Houston, is in Jackson, Mississippi, supervising extensive geophysical work his firm is doing for an independent oil operator.

N.G.A.A. holds field tests on gasoline content of gas

Members of the Gas Testing and Measurement Committee of the Natural Gasoline Association of America, conducted a series of field tests last week in the vicinity of Pawhuska, Oklahoma, according to R. D. Turner, Skelly Oil Company, chairman of the committee.

Purpose of the tests was to review under practical field conditions some proposed changes in testing methods to determine the natural gasoline content of natural gas by the compression and charcoal methods. "These were but preliminary tests," said Turner, "and they will be continued later in another part of the country, probably in the East Texas area. Since the purchase of large volumes of gas are based on these tests we are attempting to eliminate all possible sources of error in them and to assure duplicability under all conditions but considerable field data must be obtained before definite recommendations can be made."

JOE J. MAUCINI, North Texas district geologist for Continental Oil Company the past 14 years, has resigned to engage in consulting work. He will continue headquarters at Wichita Falls. Pete M. Martin, an assistant, has been placed in charge of the district.

HENDERSON COQUAT, head of Longhorn Drilling Company, has moved general offices to the Milam building, San Antonio. He maintained headquarters at Three Rivers for years, and has drilled a number of discovery wells either as his own or under contract.

PETE M. MARTIN, district geologist for Continental Oil Company, was elected president of the North Texas Geological Society. Pat Patterson, Cities Service Oil Company, and R. E. McFail, Phillips Petroleum Company, were chosen vice president and secretary-treasurer, respectively.

ANATONLE SANONOV, formerly with the geological department of Ohio Oil Company, has accepted a position on the geologic staff of United Gas Company at Houston.

S. F. SHAW, consulting engineer, is at College Station, Texas, this week to deliver a series of lectures on gas-lift at a conference conducted under the sponsorship of the Petroleum Engineering Department of A. & M. College.

K. A. SCHMIDT has been moved from Shreveport to Houston, where he will be regional geologist for Tide Water Associated Oil Company, Mid-Continent division. He has been district geologist at Shreveport.

C. P. PARSONS, vice president, Halliburton Oil Well Cementing Company, will address the Gulf Coast Section of the American Institute of Mining and Metallurgical Engineers at River Oaks Country Club on November 7. He will discuss "Lost Returns and Blowouts."

In photo, back row, left to right are Frank Wayman, Shell Oil Company; H. L. Oder, Cities Service Oil Company; Russell Clark, Phillips Petroleum Company; C. A. Mathey, Mathey Machine Works; R. D. Turner, Skelly Oil Company; Gwynne Felton, Phillips Petroleum Company.

Front row: Charles Quast and Raymond Lee, Sinclair Prairie Oil Company; S. M. McAnnelly, Lone Star Gasoline Company; A. Lucas, Skelly Oil Company. Photo taken by W. F. Lowe, secretary of the association.

Texas University plans personnel conference

The University of Texas moved last week to swap ideas with the petroleum production field of Texas and the Southwest, announcing plans to hold a two-day conference in Austin, November 24-25, on the general problems of personnel selection and employer-employee relations.

The conference, first of its kind to be attempted by the University, promised also to be the first such large-scale session for Texas. W. R. Woolrich, University engineering dean and conference chairman, said that not only Texas petroleum men but representatives of nine other fields of employment, ranging from public utilities to government offices would attend.

Still tentative, the program calls for a keynoting address by Dr. Homer P. Rainey, University president, a general session on the personnel problems of the Southwest area, clinics on job interviews, a panel of speakers giving short talks on their own problems of employment and personnel, and a round-table discussion of such recent governmental regulations affecting employer-employee relations as the wages and hours law, social security act, and the National Labor Relations Board.

Petroleum research costs $22,000,000 a year

An eighth of research workers employed by United States industry in 1938 were in petroleum laboratories, according to October "Fortune." In "The U. S. Frontier" that magazine analyzes the extent of present-day industrial research in this country, and finds that, of all 22 leading industries listed, "the accolade for the best showing should probably go to petroleum."

Looking for new frontiers for America, "Fortune" finds them in overwhelming evidence; preliminary reports, the editors say, "indicate the existence of a new world that is virtually immeasurable." In this new world, the record of research makes obvious, petroleum must take an increasingly-important part.

From seventh among the industries in 1927, with 1047 laboratory employes, petroleum researchers have grown in numbers 539 percent, and are surpassed only by chemicals. The oil industry's 5033 research employes, as of 1938, presumably represent an annual expenditure for experimenting of more than $22,000,000 although accurate cost data are not available.

Research workers from several other industries probably should be added to swell petroleum's total. In chemical, automotive, and rubber laboratories are many researchers who, though not employed by oil companies, do all of their work with petroleum. In the field of industrial chemistry particularly, according to many reports, experiments with petroleum are opening whole new vistas of petroleum-base products, and some scientists envision a vast petroleum-chemical industry within a decade. Already many basic industrial chemicals are made from petroleum—glycerin, alcohols, solvents, and resins for plastics; other products, proved in the laboratory, await only the go-ahead of commercial practicability.

Markets strong with crude supplies tight

The markets have continued strong, with most products in good demand and with supplies of crude tight in various districts.

Reduced well output in the closing week of October and curtailed refinery runs afforded a favorable statistical situation, although comparatively large gasoline stocks remain a disadvantage.

The strength of the crude market was displayed in the new 15-cent increases November 1 in prices of Pennsylvania grade crude, less than a month following a 25-cent advance.

The strong Pennsylvania crude market reflects primarily the booming market for lubricants, most important product made from that oil. But the lubricant situation also is contributing, naturally, to firmness of other crudes that are desirable for making lubricants.

Noteworthy strength is shown also in the markets for crude in Southwest Texas and on the Texas-Louisiana Gulf Coast, with oils yielding high octane gasoline in greater demand than supply, in reflection of expected increases of exports to Europe's warring countries.

The tightness of the crude markets in Texas came into the limelight last week when two members of the Texas Railroad Commission went to Washington and asked the Bureau of Mines to revise upward its estimate of market demand for Texas crude in November, although it was later indicated that the commission would not press the request, apparently having decided to be cautious in increasing Texas allowables, in view of difficulties now involved in making shipments to Europe.

The eight prorated states of the country, accounting for approximately 90 percent of the nation's crude output, have scheduled November allowables which are in the aggregate about 20,000 barrels a day under the Bureau of Mines estimate of market requirements. But in some instances, allowables increase with completion of new wells, and in other cases, the actual output fails somewhat to stay within prescribed limits. Consequently, it is indicated that production in October will approximately conform with demand, and that crude stocks will remain about unchanged.

Refined Products

Prices of refined products at the refineries and also in tank car lots in the marketing areas have not changed materially since a week ago, although some sellers have raised their quotations on lubricants and on heating oils, as the markets for those products continue to consolidate recent gains.

The light fuel oils have advanced moderately in the past few months, and additional increases would not be surprising, in view of the increasing tightness of supplies. Despite comparatively

REFINED PRICES

REFINED GASOLINE

Oklahoma Refineries:	Range Last Week (Cents a gal.)		Changes from Week Before	
62 Octane and Under	4½	4¾	...	...
63-66 Octane	4¾	5	...	...
67-69 Octane	4¾	5¼	...	...
70-72 Octane	5¼	5½	...	...
Mid-Western Tank Car:				
62 Octane and Under	4¼	4¾	...	...
63-66 Octane	4¼	4¾	...	...
67-69 Octane	4½	5¼	...	...
70-72 Octane	4¾	5⅜	...	...

NATURAL GASOLINE

Grade 26-70:				
F. O. B. Group 3	4¼		...	
F. O. B Breckenridge Texas	4		—¼	

KEROSENE

Oklahoma Refineries:				
41-43 water white	3½	4¼	...	...
42-44 water white	3⅝	4⅝	...	...
Mid-Western Tank Car:				
41-43 water white	3½	4	...	...
42-44 water white	3⅝	4¼	...	...

FUEL OILS

Mid-Western Tank Car:				
Range Oil	3⅜	3⅞	...	...
No 1 Prime White	3⅜	3¾	...	...
No. 1 Straw	3¼	3⅜	...	+⅛
No. 2 Straw	3⅛	3¼	...	...
No. 3 Straw	3	3¼	...	...
No. 5 (per bbl.)	65		...	...
No. 6 (per bbl.)	45		5	...

United States Crude Oil Production

Estimates Compiled by THE OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (Nov.)	State Allowable in Nov.	BARRELS DAILY FOR WEEK ENDED Nov. 4	Oct. 28
TEXAS—				
Texas Panhandle			69,250	78,400
North Texas			75,950	77,250
West Central Texas			26,950	25,850
West Texas			211,350	218,850
East Central Texas			83,300	89,100
East Texas Field			396,250	409,600
South Texas			197,100	190,650
Texas Gulf Coast			204,250	218,200
Total Texas	1,444,000	1,396,225*	1,264,200	1,307,900
CALIFORNIA—				
Long Beach			45,100	43,700
Santa Fe Springs			26,200	26,200
Huntington Beach			27,300	26,900
Dominguez			16,200	16,600
Ventura Avenue			34,900	36,500
Midway-Sunset			43,300	50,200
Kettleman Hills			51,700	52,400
Wilmington			85,700	85,600
Others			271,900	267,600
Total California	596,000	599,000†	602,300	605,700
OKLAHOMA—				
Oklahoma City			87,725	95,425
Seminole Area			99,795	101,500
Fitts			21,500	23,425
Others			206,555	199,075
Total Oklahoma	429,000	429,000	415,125	419,425
LOUISIANA—				
North Louisiana			65,000	65,725
South Louisiana			197,300	196,200
Total Louisiana	259,000	258,994	262,300	261,925

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (Nov.)	State Allowable in Nov.	BARRELS DAILY FOR WEEK ENDED Nov. 4	Oct. 28
ILLINOIS—				
New Pools			335,300	326,250
Old Pools			8,800	8,750
Total Illinois	303,000		344,100	335,000
KANSAS—				
Burrton-Haven			10,425	10,900
Russell County			25,500	28,625
Silica			13,575	13,675
Others			123,750	134,000
Total Kansas	169,000	170,600	173,250	187,200
NEW MEXICO	111,000	111,000	112,350	113,350
EASTERN STATES—				
Pennsylvania Grade			77,600	78,100
Others, Eastern			26,100	26,050
Total Eastern States	106,000		103,700	104,150
MOUNTAIN STATES—				
Wyoming	63,000		63,500	64,500
Montana	16,000		17,100	17,000
Colorado	4,000		3,950	3,800
Total Mountain States	88,400		84,550	85,300
MICHIGAN	63,000	71,000	63,500	64,950
ARKANSAS	57,000	68,952	67,250	65,875
MISSISSIPPI			775	800
Total 8‡ Prorated States	3,128,000	3,104,769	2,960,275	3,026,325
Total United States	3,620,000		3,493,400	3,551,575

* Daily average, considering 11 shut-down days, and various exemptions.
† Recommendation of Central Committee of California Oil Producers.
‡ Texas, California, Oklahoma, Kansas, Louisiana, New Mexico, Arkansas, Michigan.

CRUDE OIL PRICE SCHEDULES

MID-CONTINENT GRAVITY SCALE PRICES—Posted October 11-13, 1938

(Some fields of Mid-Continent have flat price postings, and are shown separately)

Gravity	[7]Okla.-Kans.	[10]North La.-Ark.	[9]Schuler, Ark. 9-13-39	North & W. Central Tex.	East Central Tex.	Gray Co. Tex.	Carson, Hutchinson Co. Tex.	[1]Tomball Tex. Type	West Tex.-New Mex.	[2]Gulf Coast (Tex.-La.) 10-2-39	[3]Some La. Gulf Areas 10-2-39	Jennings, La.	[4]Anahuac, Tex. Type 10-2-39	[5]Refugio, Tex. Type 10-2-39	[6]Mirando, Tex. Type 10-2-39	[8]Salt Creek, Wyo.
17-17.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18-18.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19-19.9	.....	.....	.....	.....	.....	.....	.....	.....	*$0.53	*$0.86	*$0.86	.....	*$0.81	*$0.91	*$0.86	.....
20-20.9	$0.60	.....	.....	.....	.....	.....	.....	.....	.55	.88	.88	.....	.83	.93	.88	.....
21-21.9	.63	.....	.....	.....	.....	.....	.....	.....	.57	.90	.90	.....	.85	.95	.90	.....
22-22.9	.66	.....	.....	.....	.....	.....	.....	*$0.95	.59	.92	.92	.....	.87	.97	.92	.....
23-23.9	.69	.....	.....	.....	*$0.78	.....	.....	.97	.61	.94	.94	.....	.89	.99	.94	.....
24-24.9	.72	*$0.73	*$0.63	*$0.71	.80	.....	.....	.99	.63	.96	.96	.....	.91	1.01	.96	.....
25-25.9	.75	.75	.65	.73	.82	.....	.....	1.01	.65	.98	.98	.....	.93	1.03	.98	.....
26-26.9	.78	.77	.67	.75	.84	.....	.....	1.03	.67	1.00	1.00	.....	.95	1.05	1.00	.....
27-27.9	.81	.79	.69	.77	.86	.....	.....	1.05	.69	1.02	1.02	.....	.97	1.07	1.02	.....
28-28.9	.84	.81	.71	.79	.88	*$0.72	*$0.67	1.07	.71	1.04	1.04	.....	.99	1.09	1.04	*$0.86
29-29.9	.87	.83	.73	.81	.90	.74	.69	1.09	.73	1.06	1.06	.....	1.01	1.11	1.06	.88
30-30.9	.90	.85	.75	.83	.92	.76	.71	1.11	.75	1.08	1.08	.....	1.03	1.13	1.08	.90
31-31.9	.92	.87	.77	.85	.94	.78	.73	1.13	.77	1.10	1.10	*$0.87	1.05	1.15	1.10	.92
32-32.9	.94	.89	.79	.87	.96	.80	.75	1.15	.79	1.12	1.12	.89	1.07	1.17	1.12	.94
33-33.9	.96	.91	.81	.89	.98	.82	.77	1.17	.81	1.14	1.14	.91	1.09	1.19	1.14	.96
34-34.9	.98	.93	.83	.91	1.00	.84	.79	1.19	.83	1.16	†1.16	.93	1.11	1.21	1.16	.98
35-35.9	1.00	.95	.85	.93	1.02	.86	.81	1.21	.85	1.18	.....	.95	1.13	1.23	1.18	1.00
36-36.9	1.02	.97	.87	.95	1.04	.88	.83	1.23	.87	1.20	.....	.97	1.15	1.25	1.20	1.02
37-37.9	1.04	.99	.89	.97	1.06	.90	.85	1.25	.89	1.22	.....	.99	1.17	1.27	1.22	1.04
38-38.9	1.06	1.01	.91	.99	1.08	.92	.87	1.27	.91	1.24	.....	1.01	1.19	1.29	1.24	1.06
39-39.9	1.08	1.03	.93	1.01	1.10	.94	.89	1.29	.93	1.26	.....	1.03	1.21	1.31	1.26	1.08
40+	1.10	1.05	.95	1.03	1.12	.96	.91	1.31	.95	1.28	.....	1.05	1.23	1.33	1.28	1.10

* Minimum price and applies also to purchases of lower gravity.

† Maximum price and applies also to purchases of higher gravity.

[1] Tomball, Raccoon Bend (Deep) and Satsuma.

[2] Includes Amelia, Barbers Hill, Big Creek, Blue Ridge, Clear Lake, Cotton Lake, Esperson, Fannett, Goose Creek, Hankamer, Lovells Lake, Lochridge, Moore, Mykawa, Nome, Orange, South Liberty, Spindle Top, Sugar Land, Thompsons, Webster, and West Beaumont.

[3] Includes Berwick Bay, Bay St. Elaine, Caillou Island, Chacahoula, Dog Lake, Edgerly, Four Isle, Gillis, Grand Bay, Hackberry, Horseshoe Bayou, Iberia, Jefferson Island, Lake Barre, Lake Pelto, Leesville, Port Barre, Starks, Timbalier Bay, Quarantine Bay, and Vinton fields.

[4] Anahuac, Dickinson, Gillock, Cedar Point, Fairbanks, Turtle Bay, Hull, Orange, Pierce Junction, Batson, Caplen, Humble, North Dayton, Saratoga, Sour Lake, South Esperson, Spindle Top, West Orange, Thompson (deep), and Raccoon Bend (shallow) fields.

[5] Includes Saxet, E. White Point, Greta, O'Connor-McFadden, Taft, Plymouth and Tom O'Connor fields.

[6] Includes Duval, Jim Hogg, Webb and Zapata counties, Texas, and Heyser and Placedo fields.

[7] Oklahoma Pipe Line and Magnolia schedules.

[8] Includes La Barge, Midway Dome, Dutton.

[9] Also Buckner, Village, Magnolia.

[10] Add 10 cents for Bunkie and Eola field prices.

Mid-Continent Flat Prices

	Flat Price	Date Posted
Arkansas:		
Smackover	$0.73	10-12-38
Louisiana:		
Garden Island	1.24	10-12-38
Gibson	1.04	10-11-38
Lafitte	1.04	10-12-38
Texas:		
Cayuga	.78	10- 2-39
East Texas	1.10	10-12-38
Talco	.65	10- 2-39
Livingston, Cleveland	1.10	10-12-38
Van	.93	10-12-38
Pettus	1.29	10-12-38
Pecos County	.78	10-12-38
Pecos Shallow	.65	10-12-38
Luling	.87	10-12-38
Lytton Springs	.99	10-12-38
Salt Flat, Darst Creek, Hilbig, Carroll, Clark and Zoboroski	.96	10-11-38
Flour Bluff-Jim Wells Co.	1.23	10-11-38
Guerra	1.06½	5- 8-39
Seabreeze, Willow Slough, La Belle, Hardin, S. China	1.10	9-14-39
Clay Creek	.85	10-13-38
Conroe	1.27	10-11-38
Long Lake	1.08	10-19-38

Middle West Prices

Lima, Ohio	$0.90	10-13-38
Illinois	.95	6- 8-39
Illinois Basin	1.05	6- 8-39
Lake Centralia-Salem, Illinois	1.05	10-21-39
Princeton, Indiana	.95	6- 8-39
Griffin, Sw., Ind.-Se. Ill., Sand	.95	10-10-39
Griffin: McClosky Lime	.85	10-10-39
Western Kentucky	1.00	6- 8-39
Birk City, Western Kentucky	.90	6- 8-39
Kentucky River, Eastern Ky	1.10	6- 9-39
Big Sandy River, Eastern Ky	1.02	6- 9-39

Michigan Prices

	Flat Price	Date Posted
Central (Basin):		
Porter, Greendale, Crystal, Wise, Midland	$1.02	10- 9-39
Buckeye, Edenville, Bentley, Beaverton	1.00	10- 9-39
Freeman, Sherman, Clare	.97	10- 9-39
Arenac, Ogemaw, W. Branch	.82	10- 9-39
Southwest (Shallow):		
Allegan, Kent Counties	1.03	10- 9-39
Van Buren Co., Bloomingdale	.98	10- 9-39
Zeeland	.85	10- 9-39
Bangor	.83	10- 9-39

Rocky Mountain States Prices

Colorado:		
Canon City, Ft. Collins, Wellington, Moffat and Florence	.90	10-11-38
Iles, Light	.98	10-11-38
Iles, Heavy	.92	10-11-38
Montana:		
Cat Creek—Cut Bank	1.10	10-11-38
Sunburst	.90	11-16-37
Dry Creek	.92	10-11-38
New Mexico:		
Artesia	.77	10-11-38
Hogback	1.00	10-11-38
Wyoming:		
Big Muddy	.98	10-11-38
Byron	.55	10-11-38
Elk Basin	.90	10-11-38
Frannie, Light	.55	10-11-38
Frannie, Heavy	.42	10-11-38
Garland	.50	10-11-38
Grass Creek, Light	.90	10-11-38
Grass Creek, Heavy	.40	10-11-38
Hamilton Dome	.35	10-11-38
Lance Creek	.77	10-11-38
Mill Creek	.72	10-11-38
Oregon Basin	.50	10-11-38
Osage	1.30	10-11-38
Poison Spider	.59	10-11-38
Rock Creek	1.00	10-11-38
Tensleep	.646	10-11-38

Pennsylvania Prices

	Flat Price	Date Posted
Bradford Allegheny	$2.40	11- 1-39
National Transit Lines	2.40	11- 1-39
Sw. Pa. Pipe Line	2.05	11- 1-39
Eureka Pipe Line	1.99	11- 1-39
Buckeye Pipe Line	1.55	3- 6-39
Corning Grade, Ohio	1.02	1-24-39

Major Price Changes

	Penna. (Nat. Tr.)	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
June 19, 1933	Up 10	Up 19	.....
June 26, 1933	Up 10	.....	Up 9-12
July 6, 1933	Up 13	Up 10	.....
July 17, 1933	Up 15	.....	.....
July 28, 1933	Up 15	.....	.....
Aug. 11, 1933	Up 10	.....	.....
Aug. 24, 1933	.....	Up 10	.....
Aug. 30, 1933	Up 15	.....	.....
Sept. 6, 1933	Up 10	Up 10	Up 15
Sept. 8, 1933	.....	Up 15	.....
May 1, 1934	Up 10	.....	.....
Nov. 6, 1934	Cut 25	.....	.....
Dec. 6, 1934	Cut 25	.....	.....
Jan. 4, 1935	Up 15	.....	.....
Feb. 4, 1935	Up 15	.....	.....
May 16, 1935	Cut 15	.....	.....
June 26, 1935	Cut 15	.....	.....
July 16, 1935	Cut 10	.....	.....
Aug. 29, 1935	.....	.....	Cut *1
Sept. 6, 1935	Up 5	.....	.....
Oct. 29, 1935	Up 15	.....	.....
Nov. 1, 1935	.....	.....	Up *28
Nov. 18, 1935	Up 15	.....	.....
Dec. 6, 1935	.....	.....	Up *9
Jan. 9, 1936	.....	Up 10	.....
Jan. 13, 1936	Up 15	.....	.....
Feb. 26, 1936	.....	.....	Up †5
Dec. 28, 1936	Up 12	.....	.....
Jan. 28, 1937	.....	Up 12	.....
Feb. 24, 1937	Up 10	.....	.....
June 7, 1937	Up 15	.....	.....
Sept. 1, 1937	Cut 22	.....	.....
Oct. 12, 1937	Cut 25	.....	.....
Dec. 1, 1937	Cut 15	.....	.....
March 7, 1938	Cut 17	.....	.....
June 13, 1938	Cut 25	.....	.....
Sept. 1, 1938	Cut 12	.....	.....
Oct. 11, 1938	.....	Cut 20	.....
Jan. 21, 1939	Up 12	.....	.....
Feb. 2, 1939	Up 8	.....	.....
March 6, 1939	Up 12	.....	.....
Oct. 6, 1939	Up 25	.....	.....
Nov. 1, 1939	Up 15	.....	.....

* Signal Hill 26 gravity.

† Seal Beach 26 gravity.

Crude Production Taxes

Oklahoma—Five percent of gross value less royalty interests.

Texas—2¾ cents or 2¾ percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market value.

Montana—Two percent of gross value at well and ¾ of 1c per barrel.

New Mexico—Severance tax of 3 percent on oil and gas.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents an acre on proved lands.

large refinery runs lately for the purpose of building up stocks of those oils, the inventories are relatively light, being now about 5 percent smaller than at this time last year, although demand has been running more than 10 percent higher than in 1938.

The heavy fuel oils also are in good demand, and with stocks comparatively low, prices have been gradually improving.

Current quotations on the various refined products range approximately as indicated in the accompanying table.

Pennsylvania prices increased 15 cents

Purchasers of Pennsylvania grade crude, effective November 1, increased posted prices 15 cents a barrel, bringing quotations to the highest level in two years. Expanded demand from industrial sources and higher prices for Pennsylvania lubricating oils were given as the reason for the increase. It is the second advance in four weeks, a 25 cent a barrel increase having been made October 6.

The new prices for Bradford and Allegany crude is $2.40 a barrel; for Southwest Pennsylvania pipe line crude $2.05, and for Eureka crude $1.99 a barrel.

Crude production and refinery runs lower

The latest statistics of the industry, covering the week ended October 28, showed sharp reductions in crude oil production and in refinery runs. But gasoline production was large, and there

Trends of United States Production and Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly reports

	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	FUEL OIL STOCKS	
					Gas Oil & Dist. Fuels	Residual Fuel Oil
1937:						
August 28	[5]3,731,450	3,425,000	309,506,000	66,997,000	112,111,000	
September 25	3,666,300	[5]3,455,000	307,974,000	65,620,000	116,472,000	
1938:						
March 19	3,433,550	3,080,000	306,380,000	[1]93,192,000	122,067,000	
August 27	3,388,500	3,255,000	285,029,000	71,754,000	29,747,000	117,179,000
September 24	3,251,150	3,220,000	280,278,000	68,605,000	31,183,000	119,285,000
October 29	3,237,500	3,145,000	275,824,000	67,590,000	33,690,000	120,029,000
November 12	3,243,250	3,180,000	273,394,000	[6]67,551,000	34,175,000	120,491,000
November 26	3,260,900	3,295,000	270,563,000	68,628,000	33,749,000	119,885,000
December 10	3,245,100	3,150,000	[6]269,509,000	68,587,000	32,068,000	118,711,000
December 31	3,201,450	3,115,000	273,024,000	71,695,000	29,082,000	115,741,000
1939:						
January 28	3,248,250	3,235,000	271,763,000	77,279,000	26,583,000	112,766,000
February 25	3,328,850	3,185,000	271,758,000	84,597,000	23,419,000	110,252,000
March 25	3,382,350	3,225,000	273,915,000	87,561,000	21,487,000	107,551,000
April 22	3,526,700	3,280,000	277,156,000	[2]87,769,000	21,058,000	105,035,000
April 29	3,568,200	3,405,000	278,440,000	86,794,000	[7]25,844,000	[7]108,409,000
May 6	3,580,900	3,275,000	[2]278,607,000	86,216,000	26,167,000	108,597,000
May 27	3,585,250	3,405,000	278,289,000	84,152,000	26,992,000	109,386,000
June 24	3,452,800	3,430,000	272,297,000	81,733,000	30,239,000	111,726,000
July 29	3,539,100	3,460,000	268,513,000	77,887,000	34,900,000	114,053,000
August 5	[1]3,909,400	3,445,000	268,982,000	76,431,000	35,601,000	114,512,000
August 26	[10]1,690,800	3,475,000	246,982,000	73,475,000	37,722,000	116,237,000
September 30	3,658,200	3,560,000	233,023,000	71,168,000	38,081,000	115,466,000
October 7	3,435,850	3,505,000	231,564,000	71,152,000	38,549,000	114,397,000
October 14	3,713,800	3,600,000	[3]229,870,000	71,263,000	38,687,000	114,780,000
October 21	3,771,550	[3]3,650,000	229,127,000	72,122,000	39,358,000	115,060,000
October 28, 1939	3,498,500	3,520,000	.....	72,660,000	39,562,000	114,786,000
October 29, 1938	3,237,550	3,145,000	[4]276,652,000	67,590,000	[8]	[9]
Change in past year	+8.3%	+11.9%	—17.2%	+7.5%	—5.1%	—8.5%

[1] All time peak. [2] Peak for 1939. [3] Lowest since April, 1922. [4] Stocks, October 22, 1938.
[5] Peak prior to 1939. [6] Lowest for year.
[7] Prior to April 29, 1939, data did not include stocks at terminals, in transit, etc., except in California
[8] Available data for year ago include only stocks at refineries, and not at terminals, in transit, etc., except in California. Those stocks on October 28, 1938, totaled 32,739,000 barrels, and comparable stocks on October 28, 1939, totaled 31,073,000 barrels, or 5.1% less.
[9] Available data for year ago include only stocks at refineries, and not at terminals, in transit, etc., except in California. Those stocks on October 28, 1938, totaled 120,540,000 barrels, and comparable stocks on October 28, 1939, totaled 109,781,000 barrels, or 8.5% less.
[10] Lowest since October, 1922, due to the shutdown of six Mid-Continent states.

CALIFORNIA CRUDE OIL PRICES

(Posted February 26, 1936; except El Segundo and Wilmington, posted October 15, 1937, and Greeley and Canal posted July, 1938.) All gravity above those quoted take highest prices of that field.

Gravity	El Segundo and Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda Brea Canyon	Athens Rosecrans	Torrance	Richfield	Whittier East Coyote La Habra	Montebello	West Coyote Hills	Santa Fe Springs	New Hall McKittrick Kern River Round Mountain	Greeley Canal	Mountain View	Midway-Sunset Buena Vista Hills Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Wilmington
14-14.9	$0.80	$0.79	$0.78	$0.79	$0.80	$0.76	.....	$0.80	$0.76	$0.76	$0.77	$0.78	.....	$0.70	....	....	$0.70	$0.70	$0.70	.....	$0.75
15-15.9	.80	.79	.78	.79	.80	.76	.....	.80	.76	.76	.77	.78	.....	.70	....	....	.70	.70	.70	.....	.75
16-16.9	.80	.79	.78	.79	.80	.76	.....	.80	.76	.76	.77	.78	.....	.70	....	....	.70	.70	.70	.....	.75
17-17.9	.80	.79	.78	.81	.80	.76	.....	.80	.76	.76	.77	.78	.....	.70	....	....	.70	.70	.70	.....	.77
18-18.9	.80	.79	.78	.84	.80	.78	.....	.82	.76	.76	.77	.78	.....	.70	....	....	.70	.70	.70	.....	.79
19-19.9	.82	.79	.82	.87	.84	.81	.....	.85	.76	.78	.77	.78	.....	.70	....	$0.70	.74	.74	.71	$0.70	.82
20-20.9	.85	.79	.85	.90	.88	.84	.....	.88	.78	.82	.77	.80	.....	....	....	.70	.78	.78	.72	.70	.85
21-21.9	.88	.79	.89	.93	.93	.88	.....	.91	.80	.85	.77	.84	$0.78	....	....	.73	.82	.82	.74	.70	.88
22-22.9	.92	.82	.92	.96	.98	.92	.....	.93	.84	.89	.79	.88	.78	....	....	.77	.87	.86	.78	.72	.92
23-23.9	.95	.86	.96	.99	1.02	.96	$0.84	.96	.88	.93	.82	.92	.78	....	....	.80	.92	.90	.82	.76	.95
24-24.9	.99	.91	1.00	1.02	1.06	.99	.88	.99	.91	.96	.85	.96	.82	....	....	.84	.97	.94	.86	.79	.99
25-25.9	1.03	.95	1.03	1.05	1.11	1.03	.93	1.02	.95	....	.89	.99	.86	....	....	.88	1.01	.98	.90	.83	1.03
26-26.9	1.06	1.00	1.07	1.09	1.16	1.06	.98	1.05	.98	....	.92	1.03	.90	Elwood	....	.91	1.06	1.02	....	....	1.06
27-27.9	1.10	1.05	1.11	1.12	.....	1.10	1.03	....	1.02	....	.96	1.06	.95	Ter-	$0.91	.95	1.10	1.06	....	....	1.10
28-28.9	1.14	1.10	1.14	1.15	.....	1.14	1.07	....	1.06	....	.99	1.10	.99	race	.94	.99	1.15	1.10	....	....	1.14
29-29.9	1.17	1.15	1.18	1.18	F.O.B.	1.17	1.12	....	1.09	....	1.03	1.14	1.03	....	.98	1.02	1.20	1.14	....	....	1.17
30-30.9	1.21	1.19	1.22	1.21	Pipe	1.21	1.17	....	....	....	1.07	1.17	1.08	F.O.B.	1.02	1.06	1.25	1.18	....	....	1.21
31-31.9	.....	.....	.....	1.24	Line	1.24	1.22				1.11	1.21	1.12	Ship	1.06	1.09	1.29	....	....	....	....
32-32.9	.....	.....	.....	1.27	.....	1.27	1.27	Kettleman Hills			1.14	1.25	1.16	....	1.09	1.13	1.34	....	....	....	....
33-33.9	.....	.....	.....	....	.....	.....	1.32	1.19			1.18	1.28	1.20	1.28	1.13	1.17	1.38	....	....	....	....
34-34.9	.....	.....	.....	....	.....	.....	1.37	....	1.23	....	1.22	1.32	1.25	1.32	1.17	1.20	.....	.....	.....	.....	.....
35-35.9	.....	.....	.....	....	.....	.....	1.42	....	1.27	....	1.25	....	1.29	1.35	1.20	....	.....	.....	.....	.....	.....
36-36.9	.....	.....	.....	....	.....	.....	1.46	....	1.31	....	1.29	....	1.33	1.39	1.24	....	.....	.....	.....	.....	.....
37-37.9	.....	.....	.....	....	.....	.....	1.51	....	1.35	....	1.32	....	1.37	1.43	1.28	....	.....	.....	.....	.....	.....
38-38.9	.....	.....	.....	....	.....	.....	1.56	....	1.39	....	1.36	....	1.42	....	1.31	....	.....	.....	.....	.....	.....
39-39.9	.....	.....	.....	....	.....	.....	1.61	....	1.43	.....	1.40	....	.....	....	1.35	....	.....	.....	.....	.....	.....
40-40.9	.....	.....	.....	....	.....	.....	1.66	....	....	.....	1.43	....	.....	....	1.39	....	.....	.....	.....	.....	.....
41-41.9	.....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	.....	....	1.43	....	.....	.....	.....	.....	.....
42-42.9	.....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	.....	....	1.46	....	.....	.....	.....	.....	.....
43-43.9	.....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	.....	....	1.50	....	.....	.....	.....	.....	.....
44-44.9	.....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	.....	....	1.54	....	.....	.....	.....	.....	.....
45-45.9	.....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	.....	....	1.57	....	.....	.....	.....	.....	.....
46-46.9	.....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	.....	....	1.61	....	.....	.....	.....	.....	.....
47-47.9	.....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	.....	....	1.65	....	.....	.....	.....	.....	.....
48-48.9	.....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	.....	....	1.68	....	.....	.....	.....	.....	.....

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resulted another contra-seasonal addition of gasoline to storage. Inventories of heating oils also were increased somewhat, but stocks of the heavier, industrial fuels were cut down, as demand continued large. Stocks of crude oil declined further in the week ended October 21, establishing a new 17½ year low.

United States crude oil production averaged 3,498,500 barrels daily in the week ended October 28, or 273,400 less than in the previous week, as an extra shutdown day in Texas reduced the output of that state 263,700 barrels. Despite the decline, however, the nation's output was 8.3 percent larger than in the comparable week last year.

Crude runs to stills, after having reached an all-time peak of 3,650,000 barrels daily in the previous week, came down 130,000 barrels to 3,520,000 a day in the week of October 28. But despite the curtailment, they were 11.9 percent greater than in the corresponding week last year.

Gasoline production increased 50,000 barrels to 12,232,000 barrels for the week, an average of 1,747,000 barrels daily.

Stocks of finished and unfinished gasoline in the United States were increased 538,000 barrels in the week of October 28, having risen to 72,660,000 barrels. At that level, they were 7.5 percent higher than at the corresponding time last year, although gasoline demand has been less than 5 percent better.

Inventories of gas oil and distillate fuels were increased 204,000 barrels to 39,562,000 barrels, but were then 5.1 percent smaller than one year before, although demand for the lighter oils is up better than 10 percent.

Stocks of residual fuel oils came down 274,000 barrels to 114,786,000 barrels, and then were 8.5 percent lower than a year previously. The demand for the heavier, industrial oils has been running about 10 percent above last year's trend.

Crude oil stocks in the United States were further reduced 743,000 barrels in the week ended October 21, having declined to 229,127,000 barrels, a new low since April, 1922. The crude inventory is 17.2 percent smaller now than a year ago.

Gas customers gain in first eight months

Customers served by manufactured and natural gas utilities totalled 17,206,900 on August 31, an increase of 372,200 over the number reported on the same date a year ago, according to Paul Ryan, chief statistician of the American Gas Association.

Revenues of the natural gas industry for the first eight months aggregated $306,204,400, a gain of 8.1 percent from a year ago. Revenues from industrial uses increased 11.6 percent, while revenues from domestic uses rose 6.6 percent.

During the eight months ending August 31, some 123,997,200,000 cubic feet of natural gas were used in generating electric power in public utility steam plants throughout the country.

Comparison of Permits Granted for New Wells

STATE	Week Ending Nov. 4	Total this Mo.	Total this Year	Total this Date Last Year	1938 Year Total
Arkansas	9	9	198	207	247
California	29	29	912	1,039	1,146
*Illinois	90	90	*210	.....	.....
Louisiana	39	39	1,198	1,069	1,214
Kansas	35	35	1,337	1,334	1,453
Michigan	33	33	1,232	802	953
†N. Mex.	10	10	†196	.....	.....
Oklahoma	57	57	1,759	1,773	1,978
Texas	173	173	8,741	11,079	12,369
Total	475	475	15,732	17,303	19,360

* Illinois data cumulative from Oct. 15, 1939.
† New Mexico data cumulative from Aug. 1, 1939.

Summary of Wells Completed in the United States Week Ending November 4, 1939

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total 1939	Total this Date 1938
Alabama	....	....	....	....	.....	1	2
Arizona	....	....	....	....	.....	1	....
Arkansas	2	....	....	2	.....	200	191
California	21	19	....	2	15,872	910	1,084
Colorado	1	....	....	1	.....	19	6
Florida	....	....	....	....	.....	....	....
Georgia	....	....	....	....	.....	1	1
Illinois	101*	78*	....	23	38,591*	3,229*	1,366
Indiana	10	8	....	2	2,236	221	124
Kansas	24	17	3	4	31,458	1,217	1,462
Kentucky	16	8	3	5	252	555	695
Louisiana	28	20	....	8	6,109	953	935
Michigan	30	20	2	8	6,843	1,272	836
Mississippi	....	....	....	....	.....	11	16
Montana	3	2	....	1	291	129	68
Nebraska	....	....	....	....	.....	1	1
New Mexico	9	9	....	....	3,043	558	454
New York	14*	14*	....	....	27	522*	592*
North Dakota	....	....	....	....	.....	....	1
Ohio	16	3	7	6	13	818	817
Oklahoma	49	29	5	15	3,705	1,759	1,852
Pennsylvania	22*	20*	1	1	29	1,314*	1,857*
South Dakota	....	....	....	....	.....	....	....
Tennessee	....	....	....	....	.....	4	2
Texas	181	140	6	35	.....	8,159	10,844
Utah	....	....	....	....	.....	....	3
W. Virginia	8	2	6	....	10	468	610
Wyoming	3	2	....	1	5,246	123	95
Total this week	538	391	33	114	199,747	22,432	23,813
Total last week	557	409	39	109	177,843	21,894	23,214
Total this year	22,432	15,324	1,625	5,493	14,783,346	....	....

* Includes water-input wells.

WORLD-WIDE DEVELOPMENTS

Edited by WM. V. GROSS, *Associate Editor*

BULGARIA

Bulgaria plans deeper wildcatting in 1940

Bulgaria's Mining Section will sponsor a deeper drilling campaign in 1940 and continue geophysical work on likely areas, according to information received from Walworth Barbour of Sofia.

Five regions in the country are considered worthy of wildcat drilling. These are, Kostenetz, Kustendil, Northwest Bulgaria, Northeast Bulgaria, and the eastern part of the Stara-Planina mountain range.

A detailed discussion of these areas will appear in an early issue of THE OIL WEEKLY.

MEXICO

Equipment to be furnished for Mexican development

Mario Casasus, identified in the Mexico City Daily Bulletin as the exclusive representative in that country of Eastern States Refining Company, Houston organization which has been dealing in Mexican crude, is reputed to have announced that Eastern States has just signed a contract with Distribuidora de Petroleos Mexicanos, distributing company, calling for delivery to Mexico of drilling equipment, pipe, pumps and other materials necessary for development. Reports are the deal calls for $600,000 worth of equipment.

Casasus is quoted that payment for the equipment will be guaranteed by Mexico with the refined products in storage at Houston under title of Mexico. He was further quoted as saying that Eastern States had formed a separate company to purchase the equipment to deliver to Mexico.

Tuxpan-Poza Rica line capacity is increased

Reports from Mexico City indicate capacity of the Tuxpan-Poza Rica pipe line recently was increased from 76,000 to 90,000 barrels daily by installation of a new pump at kilometer No. 32.

The same source states the old Penn-Mex Fuel Company's lines from the South fields to Tampico has been reconditioned and put into use again.

CANADA

Second Del Bonita wildcat preparing to go on pump

Terminal Oil Company's Del Bonita 2, on the Del Bonita structure of Alberta, 32 miles northwest of Cutbank, Montana, and 10 miles north of the international boundary between Canada and the United States, recently was completed at 5211 feet, 83 feet in the Madison limestone. A swab test after acidizing yielded 300 barrels of oil per day, but the well declined rapidly and looks like a 100-barrel well. Perforating bullets stuck in the casing are reported impeding passage of the tubing packer and preventing stage acidization. Pumping equipment is being installed.

The first well on the structure, Del Bonita 1, was drilled downstructure from the second attempt. Reports are that despite water encroachment and an uncontrollable gas/oil ratio it has been producing up to 100 barrels a day of 35 gravity oil and 2 million cubic feet of gas, and that the oil has been used without refining to fuel the engines on Del Bonita 2. Leaseholders on the dome include Wheatman Petroleum Corporation and E. L. Cord.

Western Drilling Company's Spring Coulee 1, Spring Coulee prospect, 35 miles south southwest of Lethbridge, Ontario, is drilling at 5800 feet in the Ellis shale with objective Madison lime expected at 5960 feet. The Sunburst and Cutbank sands of the lower Blairmore formations have indicated saturation but the operators have elected to drill into the Madison before choosing the most attractive zone from electrical logging records. The well, which is financed by E. L. Cord and Terminal Oil Company, is being drilled with the heaviest rig ever employed in the province.

(For a complete discussion of the characteristics and development of the Del Bonita and Spring Coulee domes see THE OIL WEEKLY of August 28, 1939, page 35.)

Canadian Crude Output Gains as Imports Wane

Canadian output of crude petroleum and natural gasoline amounted to 899,169 barrels in July as compared with 821,308 barrels in the preceding month, and 701,813 barrels in July, 1938, according to a report just issued by the Dominion Bureau of Statistics.

Crude petroleum importations dropped to 140,097,993 imperial gallons from the June total of 155,901,890 imperial gallons and were obtained from the following countries:

Country	Imperial Gals.
United States	110,237,993
Colombia	16,023,000
Venezuela	11,382,000
Trinidad and Tobago	2,455,000

Retail sales of gasoline for the six months ending June, 1939, were 321,890,000 as compared with 316,571,000 for the same period in 1938.

BRAZIL

Brazil to start taking Mexican oil next year

About the middle of 1940 Brazil will begin importing 10,000 barrels of oil daily from Mexico, according to an announcement recently made in Mexico City by Santos Valhis, representative of the Brazilian firm of Correa y Castro. Three 14,000-ton tankers will be used to move the oil to Rio de Janeiro, said Valhis, who explained that about $4,000,000 was involved in the deal.

PERU

Blue Goose starts refinery as third well is completed

Drilling & Exploration Company, developing a 90,000-acre government concession for Blue Goose Oil Company in Peru, has brought in another substantial producer, Aguas Calientes 3, for an initial yield of 250 barrels of 46.4 degree gravity oil per day from 1138 feet, thus proving the Pachitea structure a bona fide reserve. Although no gas is being produced by the well, oil is being obtained by water drive with 50-pound casinghead pressure, said to be equivalent to 700 or 800 pounds casing pressure if the well were flowing gas.

According to J. E. Brantly, head of the contracting company, production from the 2 completed wells in Peru is shut in pending construction of a $150,000 refinery expected to have a capacity of 1000 barrels daily. Preliminary plans are being prepared, and it is believed that within a reasonably short time the wells will be returned to steady production, as it was revealed that a deal has been consummated with foreign interests for purchase of the crude. Shipments will be started soon that will take oil on barges down to the mouth of the Amazon River for loading in ocean-going tankers. Officials declined to indicate who the purchasers might be, or how much they were to get for the oil.

Blue Goose brought in Aguas Calientes 1 earlier this year for about 200 barrels daily. The company staked location for Aguas Calientes 2, 1½ miles northwest of No. 1 and drilled it to 1240 feet. Although this well encountered good oil showings, it ultimately found bottom hole water and was filled with mud and was temporarily abandoned. This second project was situated along the northeast flank of the huge concession and quite close to the edge, which accounted for the location of No. 3 being placed ½ mile southeast of No. 1.

Brantly reported that additional wells will be drilled on the Peruvian concession just as soon as the refinery is constructed and other details worked out.

Meanwhile, his organization has launched a drilling campaign for the Brazilian government on 2 concessions, one in the State of Alagoas and the other in the State of Bahia, on the Atlantic coast. Three wells have been spudded in Alagoas. One, the Ponta Verde 1 (Green Point), on the north edge of the city of Macieo, is within 100 feet of the beach. Southwest of these 3 projects, Drilling & Exploration Company has launched drilling operations at Ipapagike 1 and Lobato 1, both situated in Sao Salvador, State of Bahia, about 700 miles up the coast northeast from Rio de Janeiro. Native crews are being used under supervision of American drillers.

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CHESTER

STEEL CASING AND LINE PIPE

U. S. FIELD OPERATIONS

Nebraska strike is first oil in Forest City Basin

Outstanding development of the week was discovery in Nebraska (Forest City Basin) of oil, apparently in commercial quantities, on November 1.

Pawnee Royalty Company's Boice 1, C NE NE 18-1n-6e, Richardson County, had 750 feet of 35-gravity oil in hole, from Viola or Hunton lime topped at 2279 and penetrated 4 feet to 2283 feet. It has shut down for erection of three 500-barrel tanks.

The strike is 3½ miles west of Falls City, in the extreme southeast corner of Nebraska, and is the first oil found in the current intensive campaign in the Forest City Basin, the latter development centering most in Missouri.

Structure was established through seismograph tests.

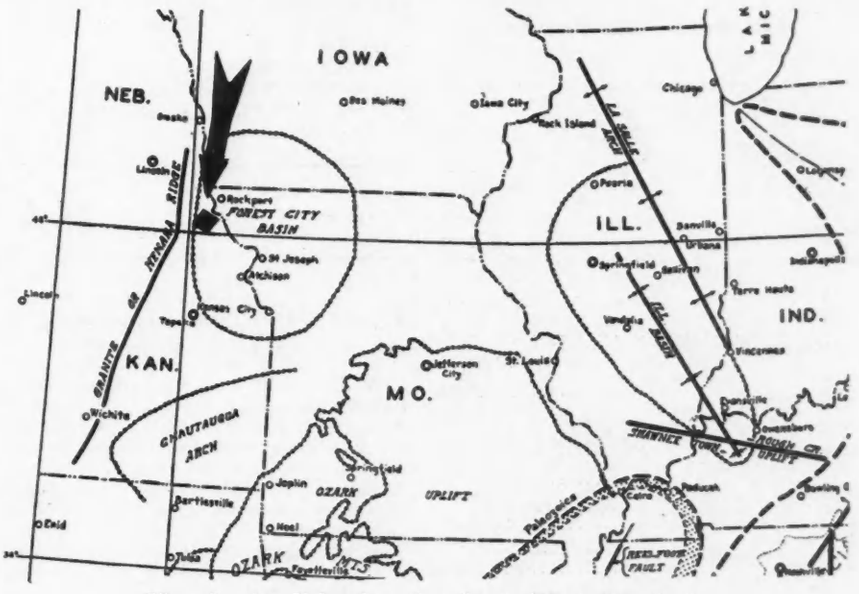
The well was spudded September 6 with cable tool rig.

Although numerous leases have been taken in this territory, the play has been comparatively light and scouts have not been carrying much about Boice 1 in reports.

Of great interest to the operators, and Ferndale Drilling Company, contractors, is a $15,000 offer of the state of Nebraska for the first well to run 50 barrels daily for 60 days.

Pawnee Royalty Company (Odessa, Texas) has a block of 60,000 acres.

Stevens & Uhri are rigging Stauffer 1, SWc NE 22-1n-13e. Two other tests are drilling in the state and 5 are shut down.



Map showing Nebraska oil strike in Forest City Basin

OKLAHOMA

Wilcox wildcat fails, but St. Louis gets extension

Tulsa.—Wilcox sands showed water at Kirk-Green-Way, Incorporated, wildcat north of Ramsey, Payne County. Finding Mississippi lime only a thin section and topping Viola lime structurally high for this area, some promise of a producer was likely. A drill-stem test from 4834-46 feet in first Wilcox sand yielded salt water. A second sand was then cored to 4851 feet for another salt water show. Hole was plugged at this level.

St. Louis was extended northeastward by a large producer. Kerlyn Oil Company et al's Ogee 1, NE NW NE 17-7n-5e, set oil string at 2842 feet on top of Calvin sand drilled to 2863 feet. In 6 hours a flow of 240 barrels was gauged and production was then pinched in to 90 barrels daily, with no water showing. The company started work on an east offset to this producer in Askew 1, NE NE NE 17-7n-5e. Sinclair-Prairie Oil Company farmed out the Ogee lease to Kerlyn and others, who have approximately 350 acres surrounding the producer.

Shawnee, Pottawatomie County, was defined to the east when Yorkan Producing Company's Shamleffer 1, NWc SW 4-10n-4e, drilled plugs from 4430 to 4547 feet in Earlsboro sand to show only water.

To Test Block

Four miles east of Wheeler pool, Carter County, Waco F. Turner staked location for Smith 1, NE SW SE 16-3s-1w, on a block of 2500 acres in Sections 15, 16, 17, 21, 22, 27 and 28 in 3s-1w. Springer and Hoxbar sand series will be tested in this 3500-foot project. Lease holders in the area include Gulf Oil Corporation, Shell Oil Company, Mid-Continent Petroleum Corporation, Magnolia Petroleum Company, Sinclair Prairie Oil Company, Indian Territory Illuminating Oil Company and Lloyd Noble.

Shell Oil Company's Kelsay 1, NWc SW 20-7n-17w, a south offset to the discovery, had a good show of oil in Viola lime at 1131 to 1134 feet and may become the third producer of Hobart, Kiowa County. Hole bottomed at 1136 feet. Prior to cementing 7-inch casing at 1079 feet, the well tested 3 barrels per hour. Conglomerate wash was topped at 840 feet. Two small oil shows were reported at 1030 feet and 1060 feet. Work was starting at Phillips Petroleum Company's Warner 1, NEc SE 19-7n-17w, a west offset to the Kelsay well and a south offset to Shell Oil Company's Ratliff 1, the second producer for the small pool.

A third gas zone proved prolific in Chickasha pool, Grady County, when Sinclair Prairie Oil Company completed Charlson 4, NEc SE 22-5n-8w, for more than 60,000,000 cubic feet daily from a new sand zone of Upper Pennsylvanian age. Prior to removing stuck drill pipe it was gauged at 43,600,000 cubic feet. Pay was topped at 3940 feet and drilled to 3967 feet. An upper lenticular sand penetrated at 3708 feet showed for better than 2,500,000 cubic feet. This well is the first test to these 2 zones.

Extension Looms

Zeb Drilling Company may extend Oklahoma City 6 blocks east. Baths Highland 1, NW SW SE 26-12n-3w, cored saturation in Simpson sand from 6198 to 6212 feet and was drilling ahead for the Johnson zone in lower Simpson. This well is checking higher than producers on the northwest, southwest and south.

The east extension area of Britton, Oklahoma County, was expecting a new producer with tanks being erected at Kerr-Lynn Oil Company et al's College Park 1, NE NW SW 21-13n-3w, which is in Simpson at 6770 feet. This test is a south offset to Orphanage 1, a producer which extended the pool last year.

Oklahoma County's new pool opened by Hall-Briscoe, Incorporated was given a market outlet. Crude from Thomp-

son 1, SWc NE 28-13n-1e, 6 miles northeast of Nicoma Park pool, will be taken by Peppers Gasoline Company. The well is averaging 130 to 140 barrels daily on pump, with only a small percentage of salt water from perforations in Cleveland sand at 4797 to 4808 feet.

Six starts were staked by Ray Stephens, Incorporated, in the northwest extension play of Cement pool, Caddo County.

A new location was made in West Doyle, Stephens County. After abandoning Coombs 1, a northeast offset to the discovery, Phillips Petroleum Company was starting work at Donahoe 1, SEc NW 5-1n-5w, a northwest diagonal offset.

Basing Wilcox sand at 7015 feet, Sinclair Prairie Oil Company was seeking Arbuckle lime below 7500 feet at Ward 1, SEc 30-7n-1e. This well previously made a gauge of 106 barrels daily on a swabbing test of Simpson zone at 6782 feet.

Oklahoma Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Carter—		
Shell, Keck 23, nw sw ne ne 5-4s-3w	7	1117
Sinclair Prairie, Ardsworth 33, ne sw ne nw 10-4s-3w	10	1035
Comanche—		
Truitt, Fee 16, se ne sw se 26-2n-11w	5	210
Creek—		
Slemp, Self 1, nwc se 31-17n-10e	15	2678
Worley, Fee 2, se sw se 34-14n-10e	35	3205
Wright, Myers 1, nw se sw 18-17n-11e	¶4	2313
Grady—		
McCasland, Wolford 1, ne se nw sw 16-3n-5w	*	2721
Hughes—		
Lynch, Bird 4, nec nw 5-8n-11e	¶0.5	1562
Amerada et al, Adams 2, sw ne sw 31-9n-9e (otd 4148 ft)	¶18	3462
Jackson—		
Gulf, Jackson 1, sec sw 31-1n-19w	29	2668
Burnham, Grimes-Hensley 3, sw se nw 10-1n-20w	32	1562
Vaughn, Stokes 6, nwc sw 11-1n-20w	25	1489
Gulf, Enos 1, nw ne ne 16-1n-20w	42	1545
Burnham, Thelma 3, ne sw se 6-1s-19w	12	2420
Lincoln—		
Stanolind, James "B" 2, csl se ne sw 35-13n-5e	78	4264
McIntosh—		
Scruggs, Lanning 1, se sw sw 19-12n-15e	*	3540
Muskogee—		
Cusack, Elliott 1, 130 ft n cn½ nw sw 20-15n-20e	*	1411
Fee 1, ne ne sw se 20-15n-20e	*	1975
Noble—		
Sinclair Prairie, Frederick 1, c ne ne 33-20n-2w (otd 5089 ft)	80	4867
Okmulgee—		
Lampert, Flint 3-A, sw sw se se 27-14n-14e	25	1148
Gilbertson, Rentie 1-A, nw sw nw nw 35-15n-14e	*	1475
Osage—		
Johnson, 18, se nec se 30-21n-9e	*	1560
Simon, et al, 4, se nw se ne 29-23n-9e	8	2077
Mertz, 3, sec 21-24n-8e	*	460
Pawnee—		
Johnson, Finley 11, sw ne nw nw 27-20n-9e	6	510
Olsen, Phillips 4, nec 5-23n-5e	*	3805
Pontotoc—		
Simpson-Roodhouse, McKoy 1, swc ne 1-2n-7e	*	2859
Patsy, Bates 1, sec nw 26-2n-7e	1544	2972
Diamond, Howard 1, nw sw se 34-2n-7e	90	1876
Marchant, Williams 1, c w½ sw ne 8-4n-5e	*	2160
McKeowan et al, Flatt 2, sw ne se 36-5n-4e	2	3233
Pottawatomie—		
Denver P & R, Hurford 1, cwl nw ne se 2-6n-4e	*	4315
Magnolia, Billington 5, nec 21-7n-5e	60	2778
Harwood, Brister 2, se sw ne 29-7n-5e	101	4218
Smith, McDaniel 2, se sw ne 31-7n-5e	70	4281
Westheimer et al, Everett 3, ne nw nw 32-7n-5e	37	4224
Yorkan, Williams 2, ne ne se ne 6-10n-4e	209	4453
Butcher, Mickish 1, swc nw 36-10n-4e	1084	4496
Seminole—		
Stanolind et al, Palmer 1, nwc 36-6n-7e (otd 4051 ft)	65	4062
I. T. I. O., House 1, sw nw nw 1-7n-6e (otd 4149 ft)	¶0.5	4224
Malernee, Hamrick 2, swc nw 34-7n-6e	21	2785
Stephens—		
Armour, Dowe 1, c s½ nw nw 30-1n-8w	*	1197
Franklin, Franklin 8, nw ne ne 24-1s-4w (otd 3351 ft)	*	2450
Carter, Spears 1, nw nec sw 15-1s-5w (otd 388 ft)	4	650
Jackson, Warden "B" 6, nw se ne nw 34-1s-5w	4	725
Carter, Magnolia-Harley 11, se se sw ne 24-2s-4w (otd 360 ft)	5	445
Tulsa—		
Potter, Kramer 1, nec nw 36-18n-13e	*	1650
Wagoner—		
King et al, Lowe 1, nec sw 9-16-18e	*	1015
Garrett, Robinson 17, c nw ne 21-19n-15e	¶0.25	1052

*Failures; †Junked; ¶Million cu. ft. gas.

KANSAS

Trapp and Prusa extended; several wildcats showing

Wichita. — Trapp was extended ¼ mile to the south when R. H. Shields' Krug 1, NWc SE 13-15-14w, Russell County, made a potential of 183 barrels daily from Arbuckle lime at 3342 feet. North of the pool, Stanolind Oil & Gas Company staked location for Sellens B-1, C S½ SE NW 19-15-13w.

Saturated Kansas City-Lansing lime at 3165 feet prompted C. W. Trickett and others to rig up standard tools at Daugherty 1, C W½ NW NE 13-19-17w. Location is ½ mile southeast of production in Westhusin, Rooks County.

Koblitz Extended

Skelly Oil Company's Koblitz 1, C E½ SE NE 22-12-18w, ¼ mile west of production in the two-well Koblitz pool, Ellis County, produced 336 barrels daily from Arbuckle lime at 3671-77 feet.

Transwestern Oil Company's Pospishel 1, C W½ NW SW 21-17-15w, Barton County, an east offset to the Pospishel discovery well, swabbed 18 barrels of oil in 15 hours from 3589 feet in Arbuckle lime. Testing will continue. Republic Natural Gas Company et al's Pospishel 1, Barton County, NEc SE 20-17-15w, discovery well, plugged back from an old total depth of 3573 feet in Arbuckle lime to 3568 feet in an attempt to shut off water intrusion. In 24 hours a pumping potential of 75 barrels of oil and 25 barrels of water, at which the well pumped off, was reported. A north offset, Iron Drilling Company's Krestin 1, SEc NE 20-17-15w, topped Arbuckle lime at 3565 feet and showed oil at 3583 feet.

When tubing and rods were run at J. A. Aylward and Republic Natural Gas Company's Harzman 1, C W½ NW SW 33-16-11w, 1½ miles south of Prusa, Barton County, it showed for 2 barrels of oil an hour from Lansing lime at 3124-3132½ feet, where casing was ripped. A 7-inch oil string was cemented at 3183 feet. North of the pool, Seaney and Clampitt et al's Schauf 1, C SL E½ SW 1-16-12w, was testing a slight show of oil from Arbuckle lime at 3358-91 feet.

Jock Garden et al's Rahn 1, C NW 13-34-5e, 6 miles southwest of Wilson pool, Cowley County, swabbed 65 barrels of oil an hour from Bartlesville sand at 2970 feet. Production is shut-in.

South and east of Frog Hollow, Cowley County, two tests picked up gas shows. Ben Gralapp's Olinger 1, C NEc 27-32-5e, 1¾ miles south of production, gauged 500,000 cubic feet from 660 feet. His Olinger 2, C NW NE 27-32-5e, 1½ miles south of Frog Hollow, made 500,000 cubic feet of gas daily from 650 feet.

Outpost Shows

Prospects of a good extension for Prusa southward brightened as D. B. and M. Drilling Company's Krier 1, C E½ SE SE 30-16-11w, Barton County, filled 700 feet with oil from Kansas City-Lansing lime at 3127 feet. This wildcat is a mile southwest of production.

The east edge of Barnhold, Rice and McPherson counties, seemed good for an extension play after Continental Oil Company's Peterson 1, C N½ SW NW 32-20-5w, flowed 101 barrels of oil by heads in 5¾ hours from Chat at 3351-82 feet and drilled to 3382 feet. Continental staked two locations.

Kansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Barton—		
Sinclair Prairie, Prusa 4, sec ne 20-16-11w	2750	3302
Stanolind, Thomas 3, cwl sw se sw 35-19-11w	3000	3295
Rose 5, c ne 3-20-11w	2174	3291
Cowley—		
Trees, Pierson 2, cwl nw ne ne 19-30-4e	*	3297
Ellis—		
Dickey, Husted 1, c n½ nw sw 18-11-17w	3500	3336
Cities Service, Colahan 3, swc nw 24-11-17w	3500	3451
Greenwood—		
Wideman, Temple 1, sec nw 25-27-8e	10	2426
Johnson—		
McCain et al, Lyons 1, nw nw sw ne 27-13-22e	*	1000
McPherson—		
Kuhns et al, Wilson 1, sec ne 26-18-1w	*	2873
Fain, Mattson 1, c e½ ne se 30-20-5w	597	3385
Pratt—		
Skelly, Lakin 1, c ne 36-27-11w (re-acidized)	¶90	4068
Skelly et al, Steffen "B" 1, c se 26-27-11w	¶86.8	4124
Harding 1, c sw 7-28-11w (re-acidized)	¶2.1	4283
Rice—		
Continental, Ainsworth 5 "A", sec nw 30-18-7w	2447	3206
Continental et al, Pickerill 4 "A", sec ne 24-18-8w	2113	3174
Cities Service, DeWitt 5, se ne ne 33-19-9w	3500	3194
Rooks—		
Bay Petroleum, Kempe "A" 1, sw se sw 31-10-17w	3500	3588
Russell—		
Texon, Rogg 2, 85 ft w c s½ nw nw 35-14-13w	1579	2854
Cities Service, Krug 1, nwc se 7-14-14w	*	3344
Wakefield, Meharg 1, sec 16-15-13w	349	3339
Coralena, Sellens 11, cwl nw se nw 17-15-13w	282	3194
Sellens 5, 280 ft e ne se sw 20-15-13w	1447	3264
Gulf, Everett 1, c w½ sw ne 20-15-13w	179	3320
Southern, Sellens "C" 3, nw ne se 29-15-13w	531	3337

*Failures; †Junked; ¶Million cu. ft. gas.

ILLINOIS

Prepare to test Devonian in Lake Centralia well

Mattoon, Ill.—Five exploratory tests nearing completion and promising new production, three in deep horizons, commanded attention last week.

Of greatest importance was Kingwood Oil Company's J. O. Shanafelt 18, NW NE 20-2n-2e, in the midst of the Lake Centralia-Salem pool of Marion County, which set casing to the Devonian lime. It was waiting on cement preparatory to drilling plug and perforating casing in prospective pay sections of the deep lime. This is the first well to test the Devonian in a section of this prolific pool considered favorable for deep lime production. Present production coming from the Benoist and Aux Vases sands and the McClosky lime already accounts for more than half of the state's total output. The Devonian was topped at 3345 feet.

The only other test carried to the Devonian in this pool, other than extreme edge tests, was drilled by W. S. Tatum on the English lease some months ago. While rumors that as much as 100 feet of Devonian pay had been encountered were being freely circulated throughout the state, the deep test was sold to The Texas Company and plugged. Deep drilling in this area has been discouraged by the larger operators because of the already saturated condition of the Illinois crude market.

Also in Marion County, Shell Oil Company's F. Lutz 1, NW NW SE 18-3n-1e, midway between Patoka, producing from the Benoist sand, and Sandoval, producing from the Benoist and Devonian, was cleaning out after a shot of nitro. Before the shot, it swabbed 100 barrels in 16 hours. Production is from the Benoist between 1430 and 1439 feet. Three new starts were recorded in the immediate vicinity.

Sand Unidentified

In Bartelso, Clinton County, Paul Moseback et al's C. Robbin 1-B, SW SE SE 5-1n-3w, 8 miles southwest of Carlyle, drilled 14 feet of saturation below 2417 feet. Although the sand was drilled with a hole full of water, there was sufficient gas pressure when the well was bailed out to force mud and oil to flow from the bailer. Casing was being set to the top of the sand, not as yet identified. The formation may be the Carper sand of the Osage group, the Hoing sand of the Devonian series, or a sand between the two. The Carper is productive in Martinsville, Clark County, where it is encountered at about 1340 feet, and the Hoing is productive in Colmar-Plymouth, McDonough County, at about 450 feet.

Jersey County

E. M. Gould's Pierce 1, SW SW NE 27-8n-10w, 3 miles east of Jerseyville and in unproductive Jersey County, set casing to 3 feet of Trenton lime saturation cored below 1304 feet after cuttings were analyzed by the State Geological Survey. This wildcat had previously reported a trace of oil at 783 feet.

In White County, Phillips Petroleum Company's Sam Garner 1, 620 feet from the north and 509 feet from the east line, NE 36-4s-10e, blew in during a drill-stem test. Information on the formation, believed to be the Aux Vases, was not forthcoming. Located north and west of Ribeyre Island and 5 miles south of the J. W. Carter well between Crossville and Calvin, it markedly improves prospects for a large area in the Wabash River region.

The Rosiclare sand was added to producing formations in Wayne County last week when Pure Oil Company's Johnson A-1, Section 27-1n-7e, in the Cisne pool, perforated casing opposite the Rosiclare and came in flowing 400 barrels a day. It is the first time any well in what is generally regarded as the "deep" part of the basin—Wayne, Clay and Richland counties—gave indication of commercial production from this formation, although several wells have tested the Rosiclare.

Johnson County

With the Illinois Geological Survey conducting exploratory work in the extreme southern counties of Illinois, Joe Zeppa's Albright 1, Section 22-12s-2e, northwest of Vienna, Johnson County, is attracting attention. Starting in the Chester or Upper Mississippian series, this wildcat topped the Palestine at 100 feet, the Menard at 180 feet, the Tar Springs at 385 feet, Glen Dean at 500 feet, Hardinsburg at 540 feet, Golconda at 645 feet, Cypress at 790 feet, Renault at 1020 feet, and Ste. Genevieve at 1147 feet. A slight show of oil was reported in the McClosky at 1225 feet, and at last report the wildcat was drilling below 1475 feet.

Illinois Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Bond County—		
Jarvis Bros., Zebb 1	*	2456
Clark County—		
Patmin Prod., Ingersoll 1	*	1724
Clay County—		
Pure Oil Co., Ausbrook 2	333	3125
J. H. Holman 3	311	3135
J. W. Leonard, Roley 1	*	3018
Coles County—		
C. D. Reynolds, Griffin 3	*	595
Edgar County—		
Phillips, Emma Six 1	*	266
Effingham County—		
Downing et al, Alwert 1	*	2500
F. Seawright, F. Wilson 1	*	2539
Phillips, D. Overbeck 1	*	2853
Fayette County—		
Texas Co., Yakel 4	189	1574
L. Irey 1	175	1582
Wynn Bros. & Bush, Sanders 1	*	1482
Carter Oil Co., Thornton 7	88	1561
Helen Walker 4	336	1575
Helen Walker 5	456	1577
Wilbur Hawkins 3	48	1570
John Allsop 2	328	1463
J. C. Beck 2	270	1593
Harold Beck 2	282	1530
Jennie Brauer 3	72	1592
Jennie Brauer 4	104	1512
Irvin Hobbs 14	556	1567
Mae Taylor 2	272	1530
Ira Boles 3	144	1525
Wm. Durbin 4	360	1543
A. Fortner 2	468	1556
H. Zetsche 2	348	1587
B. Miller Kimbrell 2	36	1521
Wm. Ireland 11	762	1583
Martha Tiney 6	816	1575
Hopper-Cummings 27-2	I	1585
Cater & Magnolia, Raymond 3	578	1543
Hamilton County—		
Kingwood Oil Co., Schnuch 1	*	3550
Jefferson County—		
Carter, Copple 2	90	1957
James I. Cameron 1	120	1947
S. W. McGee, Caster 1	35	2089
Lawrence County—		
Ann Bell Oil Co., Wright 1	*	2770
McDonough County—		
Fowler, Hunter & Cruse, E. Stoneking 1	*	700
Marion County—		
Texas Co., E. Farthing 6C	42	1886
H. Heyduck 7	91	1881
Richardson Roadway 1	*	....
Richardson Roadway 3	48	1886
W. B. Carr 4B	2898	1836
C. H. Friedrich 1	819	1869
G. Johnson 7	2807	1858
R. Murray 2	119	1889
A. Richardson 2	2625	1841
M. A. Tate 4	1120	1861
D. Young 14	2212	1876
N. Lee 18	455	2029
F. Miller 9	714	2070
W. T. Richardson 9	1568	1990
K. Wayman 15	1652	1908
Wallace-Wright et al, Bryant 1	*	1860
Max Pray, Robinson 3	4200	2935
Southwestern O&G Co., Benoist 23	800	2924
Florance Oil Corp., Suggs-Meeker 1	*	2092
Kingwood Oil & Bell, Shanafelt 3C	1250	1866
Robey Dr. Co., Johnson 1	*	2134
Haynes & Thomas, Chitwood 2	25	2102
Magnolia, Chitwood 37	48	2155
D. A. Shanafelt 6A	84	1880
W. O. Chitwood 34	180	2080
J. H. Young 61	300	2080
J. H. Young 62	288	2080
Ohio, Lloyd 20	180	1852
Lloyd 8	60	1849
Wiser Oil Co., Weems 9	1000	2070
Harvey Oil Co., Kagy Trustee 6A	375	2153
Mrs. L. P. King, Kagy 3	300	2149
Perry County—		
Gilliam et al, Brostmeyer 1	*	1610
Wabash County—		
Anding et al, Nash 1	140	2464
F. M. Blair, Jr., Pruscott 1	168	2457
Centralia Ref. Co., French 1	144	2460
Sidney Davis, N. Brines 1	52	2464
D. & H. Dr. Co., Bump 1	125	2437
Hart & Carroll, Nash 1	275	2445
Earl Hollandsworth, Beard 1	350	2467
Marvel Oil Co., F. Collins 1	82	2423
Southern Illinois Ref. Co., Garrett 1	100	2471
R. Struthers, Parmenter 1	250	2470
Vickers et al, Bump 1	166	2437
Vichus Pet. Co., Bump 2	206	2441
P. T. Word, F. A. Nash 1	165	2464
Fotiades, Lovellette 1	170	2460
W. M. Bartlett, Stansfield 3	90	1736
Continental, Schauf 4	15	2478
Olin et al, Schulz 8	10	2473
Washington County—		
Armer et al, Norwicki 1	*	1348
Magnolia, Kurwicki 8	*	1550
J. Barelzewski 2	40	1267
Wayne County—		
Pure, Butt Consolidated 2	3	3150
F. Behymer 5A	459	3106
Fred C. Hill 2	1190	3110
Illinois Mid-Continent, Wright 1	226	3383
Robinson et al, Hornick-Murphy 3	416	3425
White County—		
Kingwood Oil Co., Tullis 1	12	3520
Pace & German, How 1	*	3100
Ben Nation, C. O. Garrett 1	*	3554
White et al, H. C. Ford 1	*	2990
Mazda Oil Co., Carmi Orphanage 1	*	2990

*Failures; †Junked; ¶Million cu. ft. gas. "I" indicates gas input well.

INDIANA

Columbia Township area records new oil sand

Evansville, Ind.—New impetus was given to drilling in eastern Gibson County by completion at 1362 feet of Midwest Development Corporation's Harrison J. Bryant 1, 350 feet from the south and 350 feet from the west line, NW NE 15-2s-9w, Columbia Township, in Cypress sand with an initial pumping production of 165 barrels in 24 hours. The sand, a new producing horizon in this area, was topped at 1344 feet. The well is 2 miles east of Francisco, where shallow sand production has been obtained for many years.

Apex Drilling Company's New Har-

mony National Bank 1, SE SE NW 27-3s-14w, southwestern outpost to Griffin, Gibson County, was running an electric test to determine production possibilities in 15 feet of Cypress sand.

Superior Oil Company's Mumford Realty Company 1, NW SW NE 31-3s-13w, wildcat in north Posey County and east of the south Griffin producers, was drilling in sand at 2110 feet.

In Vandenburg County, John L. Drake's K. Keif 1, 200 feet from the north and 300 feet from the west line, NW 5-6s-10w, topped the Mansfield sand at 1065 feet and was abandoned at 1100 feet.

Five new wildcat starts were recorded: In Dubois County, Apex Drilling Company's Clara Grant 1, NE SW NE 28-1s-3w, was a derrick; in Knox County, Michel Brothers' Jasper Schloot 1, 250 feet from the south and east lines, SE SE 2-5n-7w, was a location; in Vandenburg County, Volkman's Heldt 1, 2340 feet from the south and 2440 feet from the west line, Section 18-7s-11w, was drilling at 1000 feet, and Hawkins' F. W. Force 1, NW SW SW 7-7s-11w, was a location; in Warrick County, Gulf Refining Company's D. S. Reed 1, 661 feet from the north and 982 feet from the east line, NE NE 12-6s-9w, was a location.

Indiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Gibson County—		
Lewis Production Co., Cooper D-3..	435	2780
Hollandsworth & Bander, Cooper 17	363	2868
Joe Bander, Cooper 2.....	270	2088
Papoose Oil Co., Cooper B-1	100	2502
Continental, Cooper 5	83	2877
Pike County—		
Murphy Oil Co., Stewart 8.....	35	969
Posey County—		
C. W. McKeehan et al, Keck 1....	900	2503
Sun, Heil 4	50	1893
Spencer County—		
W. S. Tatum, Hinkle 1.....	*	2500
Vanderburg County—		
J. S. Drake, Keif 1.....	*	1100

*Failures; †Junked; ¶Million cu. ft. gas.

MISSISSIPPI

Two locations at Tinsley, one deep wildcat announced

Jackson, Miss.—Locations have been made at Tinsley Dome, Yazoo County, for Jones & O'Brien's Stevens 2, C SE NE 13-10n-3w, and Union Producing Company's Woodruff 2, 3220 feet south, 680 feet east NWc SE 13-10n-3w.

In Hinds County, Byrd-Frost et al are moving in for Gaddis Farms 1, SE SE 12-6n-3w, a 6000-foot wildcat on a 10,000-acre block near the town of Bolton.

On the edge of Jackson gas field (Hinds County part), Love Petroleum Company's Blind Institute 1, SW SE SE 34-6n-1e, shut down at 2662 feet in Midway chalk, probably a failure, finding formations low.

Current drilling in Mississippi:

Attala County—Kosciusco Oil Co.'s Carroll 1, sw sw 26-13n-8e, materials. P. & M. Oil Co.'s McMillian 1, sw se se 26-13n-5e, materials.

Ittawamba County—G. G. Grasty's Kentucky 1, 1320 ft e and 660 ft s of c 7-10s-10e, spudded second hole.

Issaquena County—Locke & Mellard's Gary 1, se nw 14-9n-6w, materials. A. A. Chaney's Mohanna 1, c ne 13-18n-3e, materials.

Lamar County — Mississippi-Louisiana Oil Synd.'s Simmons 1, sw ne 32-3n-14w, lcn.

Prentiss County—Home Dev. Co.'s Allen 1, nw se 8-7s-9e, dr 1210 ft.

Wilkinson County—Louisiana Progress Oil Inc.'s Young 1, se 40-4n-1e, dk.

Hinds County—Byrd-Frost et al's Gaddis Farms 1, se se 12-6n-3w, materials. G. Jeffreys' Gaddis-McLaurin 1, nw sw 17-7n-2w, dr 4195 ft. Love Petroleum Co.'s State 1, se se 34-6n-1e, sd.

Yazoo County—Jones-OBrien's Stevens 2, c se ne 13-10n-3w, rig. Union Prod. Co.'s Jennie Stevens 1, c nw nw 13-10n-3w, dr 5105 ft black and sandy shale; Friley 1, ne se 14-10n-3w, spudded. Yazoo Refinery, Inc.'s Brooks 1, w½ se nw 17-10n-2w, materials.

KENTUCKY

Wildcat drilling near old shallow gas field

Owensboro, Ky.—T. L. Boyce's Arabella Walker 1, 3960 feet from the east and 520 feet from the north line, Section 10-N-24, Henderson County, and north of an old shallow gas field, was drilling with rotary below 900 feet.

Mocarz Oil Company's L. S. Howard 1, 2610 feet from the east and 3950 feet from the south line, Section 21-N-25, wildcat test near Beech Grove, McLean County, was abandoned at 1245 feet after drilling through McClosky.

Two other wildcats were abandoned last week. In Breckenridge County, Lion Oil Refining Company's Fannie McCoy 1, 2700 feet from the north and 400 feet from the east line, Section 16-P-38, was plugged at 1600 feet, and in Webster County, Smith & Toomes' O. H. Parker 1, Beech Grove District, was abandoned at 1352 feet.

Sole wildcat start of the week was Dr. W. L. Wood's Fee 1, 3100 feet from the north and 1000 feet frrom the west line, Section 5-E-24, Christian County. It was drilling at 550 feet at last report.

John Wooten et al's Morse 1, 1800 feet from the east and 400 feet from the north line, Caldwell County, was drilling at 750 feet with cable tools. Hollis Amis is contractor for this wildcat.

Shallow Show

A Livingston County wildcat, Lewis E. Maxson's Wells 1, 2300 feet from the west and 225 feet from the south line, Section 23-I-16, reported an oil show at 200 feet. It was drilling below 350 feet.

Hart & Hart and John E. Williams' Mrs. Mary Haywood 1, 1200 feet from the north and 950 feet from the west line, Section 4-Q-31, Daviess County wildcat, was drilling below 900 feet.

Kentucky Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Breckenridge County—		
Lion Oil Ref. Co., F. McCoy 1.....	*	1600
Butler County—		
Billy Phillips, M. Hawes 3.....	15	479
Daviess County—		
Stewart & Snyder et al, Hansford 2	50	1479
J. C. Ellis, Ellis 2.....	15	1155
Creek Drilling Co., G. Morgan 6...	*	1766
A. D. Schaffer et al, Burns Bros. 2	*	1833
Hancock County—		
Walker et al, Boling 4.....	*	680
Henderson County—		
Sun et al, G Trigg 2.....	120	2613
Knott County—		
Warfield Natural Gas Co., Day 4839	¶.36	3172
W. A. Justice 4840	¶.20	2647
McLean County—		
J. C. Ellis, Edmonds 2.....	12	1101
Martin County—		
Virg'an Gas & Oil Co., Cassidy 1270-V	15	1264
Ohio County—		
H. Smith, J. Mattingly 8.....	15	400
J. C. Miller, J. F Smith 6.....	10	748
Pike County—		
Columbian Fuel Co, Smith GW-833	¶.38	1884
Webster County—		
Smith & Toomes, Parker 1.....	*	1352

*Failures; †Junked; ¶Million cu. ft. gas.

APPALACHIAN

New York Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Allegany County—		
Sloan & Zook, McDivitt farm, Bolivar	4	1085
Bradford Prod. Corp., Willetts farm, Genesee	6	1375
C. H. Lavens Est. et al, Fee farm, Genesee	5	1290
Wm. Bartoo et al, Fee farm, Genesee	4	1320
Jacob Trinkle Est., Hill farm, Genesee	3	1345
Cleveland Oil Co., Wetherby farm, Clarksville	5	1690
Allegany: Water Intake Wells		
Ford Oil Co., Frederick farm, Alma ...		1272
Harold Duke et al, D. W. Witter farm, Scio		1256
L. H. Thornton, Agt., Brown farm, Alma		1240
Quaker Oil Co., Brown farm, Alma ...		1260
Chas. Johnson et al, Chas. Rogers farm, Scio		458
Chas. Rogers farm, Scio..... ...		470
H. W. Patterson, Coyle-Fuller farm, Scio		780
Coyle farm, Scio		770

Pennsylvania Completions

Bradford District		
Grant & Mohan No. 3, Bing 484-5..	2	....
Hardwick, Rice & Tuohy, Fisher...	2	....
D. E. Quinlan Estate, Fee.....	3	....
Quinlan Oil Co., Fee.....	5	....
Mathew Lippert et al, Lippert....	5	....
Forest Oil Corp.....	1	....
Bradford Transit Co., 9 wells.....	9	....
Bradford: Water Intake Wells		
Forest Oil Corp..... ...		....
Forest Petroleum Corp..... ...		....
Niagara Oil Corp., 2 wells..... ...		....
Butler-Armstrong District		
E. A. Bream Co., Weiland Heirs...	*	....
Middle District		
Vogelbacher Bros., J. B. Vogelbacher, Sr.	1	....
Mrs. J. M. Haines, Lot 57.....	1	....
New York-Pennsylvania: Gas Field		
G. L. Cabot, Inc., F. Dickerson....	¶	....

West Virginia Completions

Gilmer County—			
Cain & Elliott, Springston 1.....	¶.08	1875
Mud Lick O&G Co., Kelly 3.....	¶.23	1955
Kanawha County—			
Columbian Carbon Co., Hanna 1...	¶3.50	4855
United Fuel Gas Co., O'Dell 4853..	¶3.55	4972
Lincoln County—			
Big Laurel Gas Co., Plumley 1....	¶.20	3532
Ritchie County—			
West Virginia Investment Co., Amick 1	5	1902
Roane County—			
Bonnett O&G Co., Haines 1.....	5	1486
Morley O&G Co., White 2.....	¶.24	1001

Ohio Completions

Athens County—			
Ross, Weimer & Ross, Wingett 1..	*	540
Hocking County—			
Preston Oil Co., Sunday Creek 1696	10	3554
Knox County—			
Brown et al, Burras 1	¶.54	2140
H. E. Perkins, Young 1.....	*	2556
Licking County—			
C. A. Moore, Heller	¶4.00	2685
Shrider et al, Rice 1.....	*	2738
Medina County—			
Marine Trust Co., Ripley O27.....	I	515
Oko Oil & Gas Co., Brinker 35....	*	388
Monroe County—			
Gold Crown Oil Co., Christy 3.....	¶.12	776
H. B. Walker & Co., Pittman 1...	*	1691
Muskingum County—			
Ellis Coal Co., Fee 1.....	*	3900
Noble County—			
Rich et al, Miller	¶.09	1486
Perry County—			
Davis & Hazlett, Penrod 1.....	3	3697
O'Mara & Sturm, Morgan 1.....	¶.20	814
Stark County—			
White et al, Tessmar 1.....	¶.35	4587
Washington County—			
Lone Pine O&G Co., Burkhart 3...	¶.02	1896

*Failures; †Junked; ¶Million cu. ft. gas. "I" indicates intake well.

WEST TEXAS

First try for oil in north end of Permian is failure

Midland, Texas.—Prospects of sub-Permian production in the north end of the West Texas Permian Basin district were dimmed when the first deep test encountered the equivalent of basement rock without reaching the Pennsylvanian or Ordovician series, both considered potential sources of production. This disappointing development was provided by Humble Oil & Refining Company's Westheimer & Daube 1, northwestern Cochran County, projected 9500-foot wildcat, in reaching extremely hard chert, quartzite and lime at 7353 feet. It was drilling at 7410 feet, and is due to be abandoned.

Progress on the Cochran County wildcat has been closely followed since it topped the Yeso member of the Permian at 4680 feet, with an elevation of 3862 feet, as any shows below the regular lime pay zone would have precipitated a large scale lease campaign across the north rim of the basin. Westheimer & Daube 1 is on a 50,000-acre block, and is 26 miles east by north of Shell Oil Company's Harwood 1, Milne sand structure, Roosevelt County, New Mexico, which quit in granite at 7957 feet, with an elevation of 4200 feet.

Near Critical Depths

Two additional wildcats in Cochran County are nearing decisive levels for production in the regular Permian. Atlantic Refining Company's Boyd-Humble 1, Labor 11, League 56, Oldham County School Lands, logged first porosity at 4949 feet, and was coring at 4960 feet. Top of brown lime was called at 3860 feet, and first solid lime at 4220 feet, with an elevation of 3658 feet. It is 3 miles east by south of nearest production and will be a factor in determining if Duggan and Slaughter fields are related. Dean Brothers and Ed Hyde's Reed 1, C SE SE Section 21, Harrison-Brown Survey, 6 miles southwest of Dean pool, was drilling at 4720 feet, having logged top of brown lime at 3950 feet and solid lime at 4320 feet, with an elevation of 3788 feet. Protection acreage outside the block and in the general area has been selling at $7.50 per acre.

High structural position was recorded by the most southerly of a trio of tests drilling for the Ordovician zone in Apco pool, Pecos County, while a north outpost appears to be running low. Magnolia Petroleum Company's J. I. Masterson 1, C N¼ S¼ H&GN Section 104, Block 10, provided the favorable development in logging oil saturation in Ellenberger at 4515-36 feet. Top of this lime was called at 4505 feet, or 2071 feet subsea. A string of 5½-inch pipe was cemented at 4505 feet. Anderson-Prichard Oil Corporation and Monte Warner's Masterson 2, north offset to their discovery, entered the detrital zone at 4515 feet, with an elevation of 2430 feet, and was coring black lime at 4597 feet. No shows were recorded. Childress Royalty Company's Masterson-I.T.I.O. 1-D, southeast offset to the discovery, was drilling at 4350 feet. Olson Drilling Company and Bryce McCandless' Crockett 1, southeast portion of T. C. Section 5, Block 110, has rigged up to try for Ordovician production. It is 2½ miles south by west of Apco. Nearby lease owners are supporting the project with dry hole contributions.

A production test for Magnolia Petroleum Company's George Sealy 2-43, prospective oil strike for a reef type structure in Ward County and west of the main trend of production, was due late last week after gun-perforating liner opposite lime saturation at 2914-22 feet and 2932-52 feet. The well gauged 69,500,000 feet of gas with oil spray before being killed to cement 553 feet of 5½-inch line on bottom at 2956 feet. The big gas yield is from above the oil zone.

Western Ward County has been given another Delaware lime prospect by Merry Brothers and Perini, Incorporated's B. S. Hayes 1, north corner H&TC Section 148, Block 34, 2½ miles northwest of an abandoned wildcat producer. This project has been under consideration since last spring.

Cascade Petroleum Company, co-discoverer of Bennett field, Yoakum County, has sold its full interest leases within and adjacent to the field to Plymouth Oil Company for $200,000 cash and $900,000 payable from ⅛ of the production. The deal involves 1040 acres, including a 160-acre lease on the northwest edge of the field with 2 wells. The purchaser, owner of 75 percent of the Big Lake Oil Company, will develop proved acreage, with 4 required offsets on the initial program. Cascade Petroleum Company, headed by C. J. (Red) Davidson, will continue active through joint operations with Honolulu Oil Corporation. Plymouth Oil Company began negotiations several months ago for the acquisition of controlling interest in all properties held by Amon G. Carter in the Wasson field. The latter is to complete a recently launched 10-well drilling campaign before the end of the year. A deal is expected to follow.

Two wildcats are being considered for Lynn County, situated east of the north portion of the Permian Basin. H. F. Wilcox et al propose to drill a test in the northwest portion of the county near John L. Baldridge et al's recently junked 4450-foot test. Honolulu Oil Corporation is credited with having placed a major portion of its 11,500-acre block centering about 4 miles southeast of Wilson in the hands of an independent to promote a Permian test.

Texas Panhandle Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Carson County—		
Northern Oil Co., E. Cooper 8	691	3146
Skelly, Schafer 100	358	3222
Gray County—		
Humble, Merten 9	410	3267
Magnolia, C. S. Barrett 8	127	3280
Shell, Haggard 16	320	3304
Stanolind, Merten 9	198	3283
Hutchinson County—		
Power Pet. Co., Haile 5	474	3044
Stanolind, Terry 20	286	2993
Watkins 10-B	386	2878
Moore County—		
Shamrock O&G Corp., Sneed 16	¶43.6	2898
Potter County—		
U.S.B. of M. (Sinclair Prairie), Bush 2-A (pb to 3590 ft)	¶12	6161
Wheeler County (Wildcat)—		
Smith Bros. Ref. Co., J. K. Ribble 1	*	4135

*Failures; †Junked; ¶Million cu. ft. gas.

West Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Crane County (Gulf-McElroy)—		
Gulf, McElroy 202	679	2912
Crane County (Sand Hills)—		
Humble, Tubb 31	5678	4420
Crockett County (Crockett)—		
Gilcrease Oil Co., University-Humble 3-13	51	1490
Ector County (Foster)—		
Broderick & Calvert, Witcher 13	1624	4172
Lee Drl. Co., Johnson 4	1473	4335
Johnson 5	1636	4335
Stanolind, E. F. Cowden 29-A	537	4180
E. F. Cowden 25-B	497	4180
Sunray Oil Co.-York & Harper, Witcher 3-C	1894	4162
Ector County (Goldsmith)—		
Gulf, Goldsmith 227	1716	4206
Goldsmith 228	828	4181
Ector County (Jordan)—		
Fogelson et al, University 4-B	281	3702
Shell, University 6-D	1199	3662
Ector County (North Cowden)—		
Delaney et al, R. W. Smith 6	1323	4411
Gaines County (Seminole)—		
Osage Drl. Co., G. Crain-Shell 1	83	5320
Gaines County (Wasson)—		
Amon Carter et al, Wasson 2-E	955	5025
Hockley County (Slaughter)—		
Stanolind, Slaughter 2-B	640	4970
Howard County—		
J. F. Postelle et al, Snyder 1	136	2855
Jones County—		
Fain-McGaha Oil Corp., Lewis 5	625	1931
Jones County (Wildcat)—		
A. H. Tarver et al, A. S. Barkley 1	*	5436
Kent County (Wildcat)—		
Dawson et al, Haggins 1	*	360
Pecos County (Lehn)—		
Rockdale Oil Co., Sullivan 1	169	1717
Sahara Oil Corp., O'Brien-Sullivan 1	133	1740
Pecos County (Shearer)—		
Oliver & Cowden, Masterson 2	10	1890
Scurry County (Sharon)—		
Magnolia, R. O. McClure 2	276	2430
Taylor County—		
Bradford & Robertson, V. B. Reeves 1	720	1737
Ward County—		
W. A. Black & Sons, Texas Cotton Ind. 1	251	1901
Buffington & Smith, Samuels 1-a	23	2270
Mid-Continent Pet. Corp., Sealy-Magnolia 2	135	3037
Sinclair Prairie, Archenhold 18	324	2697
Archenhold 19	333	2649
Texoil Producing, Inc., Allen 5	182	2100
Winkler County (Halley)—		
Skelly, Halley 33	29	2800
Yoakum County (Bennett)—		
Honolulu Oil Corp.-Cascade, Willard 5-741	963	5220
Mabee O&G Co., Willard 10-741	1817	5185
Yoakum County (Wasson)—		
F. M. Allison Prod. Co., Edens 5	1040	5135
Aloco, Hovencamp-Texaco 3	1645	5105
Johnson-Texaco 5	822	5236
Basin States Oil Co., Hague 4	662	5195
Eastland Oil Co., Chandler-Skelly 3	1170	5214
Gulf, J. C. Futch 2	382	5215
Humble, Wooten 20	676	5140
Magnolia, Kendrick 3-867	1688	5120
Milhoan Production Co., Willard 4	1487	5170
Shell, Roberts 8	762	5200
Tide Water, Campbell-Posey 1	1153	5070

*Failures; †Junked; ¶Million cu. ft. gas.

West Central Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Coleman County—		
Coleman O&G Co., Powell 1	¶4½	2271
Comanche County—		
Choate & Armstrong, Seale 1, sec 1	*	700
Hamilton County (Wildcat)—		
Wallace & Vickers, Lund 1	*	3456
Palo Pinto County—		
Goble-Moore Drl. Co., Costello 3-A	10	1408
Shackelford County—		
Alexander et al, Fee 1	¶50,000 ft.	582
Danciger, McCown 7	2496	3195
Roeser-Pendleton & Conoco, Cook 41-A-84	*	1583
Stephens County (Stribling)—		
Horwitz & Oldom, Dance 2	1968	3582

*Failures; †Junked; ¶Million cu. ft. gas.

NORTH TEXAS

Bonita pool gets new sand and 3500-foot extension

Wichita Falls.—The deep oil horizon in Bonita, eastern Montague County, was expanded 3500 feet southeast when United Producers Company and Continental Oil Company's J. T. West 1, northeast corner of the J. S. Howard Survey, filled 2000 feet with oil in 12 hours from sand at 3914-34 feet. Pumping equipment is being installed as the gas volume is insufficient for a steady flow. This outpost logged a comparatively thin section of granite wash, and entered the lower Strawn pay 73 feet structurally low.

Phillips Petroleum Company's Custer 1, northeast edge test for the pool, made a 15-barrel pumper after plugging back from granite at 3735-68 feet for completion in a new sand at 2020-30 feet. Holmes, Thomas and Fisher's Reed-Texaco 1, J. L. Graham Survey, northeast outpost, was drilling at 2965 feet, having passed up a show of oil in lime at 1928-60 feet and in sand at 1960-65 feet, followed by 25 feet of broken sand.

North Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County (Hull-Silk)—		
Ligon et al, Anderson 1	544	4414
Anderson 3	680	4402
Archer County (K-M-A)—		
C. H. Staley Oil Co., Mangold 16, blk 31	672	3850
Archer County—		
Craig et al, Andrews 1-A, sec 1825	*	945
Fresno Oil Co., Prideaux 25	5	702
Archer County (Wildcats)—		
Atchley et al, Hausler 1	*	1136
Boardman et al, Pastusek 1, blk 38	*	1520
Clay County—		
Kolp et al, Magnolia 3, blk 47	7	334
Cooke County—		
Bridwell Oil Co., Parkey 8	12	744
Parkey 9	22	706
Pace Pet. Co., Aldridge 17	10	1208
Robinson et al, Otto 16-B	9	1335
Staniforth et al, B. Voth 4	333	1674
Jack County—		
Perrin et al, Rhodes 5	400	3153
Rowan-Nichols Oil Co.-E. L. Wilson, Matlock 3	375	3126
Jack County (Wildcat)—		
Willis et al, Roney 1, sec 3326	*	413
Wichita County (K-M-A)—		
Bridwell Oil Co., Mangold 4, blk 34	1120	3828
Consolidated et al, Barnes 3-A, sec 9	600	4008
E. C. Oil Co., Mangold 13, blk 35	568	3857
Grace & Wood, C. Birk 5	80	4063
Heyser-Heard & Clardy, Fassett-Tuttle 3, sec 3	840	4049
Kadane, Inc., R. J. Bradley 1	*	4047
Melat & Graham, Munger 6-A, blk 24	680	3887
Palmer & Chenault, Inc., McCarthy 13	600	4016
Royal Pet. Co., James 3, sec 16	696	4001
Wichita County—		
Forbes & Golden, Merten 10	*	556
Perkins & Cullum, Burnett 27-A, sec 1	3	671
Proctor et al, Ed. Foster 1-C, sec 1	*	1040
Wilbarger County (Consolidated)—		
Consolidated et al, Waggoner Est. 2-CC, sec 36	872	3775
G. B. Ancell 1-N	510	3772
Young County—		
Bernsen & O'Rourke, Harlan 3, sec 1972	524	2770
Lupton & J. McLester, J. A. Brown 4	405	3811
McDaniel & Page, Perkins 3, sec 206	*	750
R. J. Watson et al, Larimore 3, sec 253	10	579
Young County (Wildcats)—		
Rhea Anderson et al, A. Bernhardt 1, sec 238	*	1028
Gentex Oil Co., Mrs. N. Burch 1	*	4364
Moran & Sons, Campbell-Conoco 1, sec 1463	*	1050

*Failures; †Junked; ¶Million cu. ft. gas.

Montague County's deep Strawn pool on the west side of Nocona recorded its sixth flowing producer with the completion of Tom E. Nix and Rogers' Cemetary 1, which flowed 176 barrels oil in 3 hours through open tubing after gun-perforating casing opposite saturation at 4324-39 feet and 4352-64 feet. It was drilled to 4444 feet. Sunray Oil Company and Ramsey Petroleum Company's Burnett 1, south outpost, missed the 4300-foot pay, and is preparing to run pipe to test original oil pay for the pool at 4632-41 feet, a core pulled at 4653 feet had a salty taste, according to reports.

Buy Hull-Silk Leases

Ed Cox and Jake Hamon are to participate in development of the Hull-Silk deep lime area, Archer County, through purchase of Louis Sikes et al's Anderson 162-acre lease, embracing the NW¼ Section 38, and a pumper in the 4400-foot Strawn for $160,000, including cash payment of $45,000. A cash bonus of $12,500, and $50,000 payable from production was paid for 50-acre lease in Section 24, offsetting the above property on the west. Felix Payne et al assumed obligation to start a 4500-foot test within 3 months and payment of $17,500 out of oil for lease on 425 acres of the White ranch, Section 40, southeast of the field.

Bert Ligon et al's Wilson 1-B, NWc Lot 9, Section 26, south by east outpost for the Hull-Silk field, was listed as a failure after testing the 2 oil zones. This test was drilled to 4415 feet, and is on a farm-out by Shapp Oil Company.

Archer County has 2 deep lime prospects that have logged adequate saturation to indicate oil producers. W. B. Hamilton et al's Graham 5 passed up shows in the Caddo, topped at 4755 feet, and has cemented 7-inch at 5205 feet. An unidentified lime was encountered at 5210-11 feet. Perkins & Cullum's Falls County 183, Block 21, also located in the southwest part of the county, recorded more oil saturation at intervals in drilling to 4997 feet, where operations were halted for rig repairs. Casing will be run for production test after fulfilling contract depth.

Pending deep explorations for this southwest sector of Archer County involves a test by Shell Oil Company on a core-drilled block, centering 4 miles north of Megargel. The company has completed 13 1500-foot tests on the Turbeville, Blewett, Burns and Colgan tracts under a 90-day option, and started a projected 1600-foot oil test on the latter. Continental Oil Company is negotiating for contract to deepen Harry Hines & Hancock's Anderson 1, Block 23, from 4002 to 5200 feet, and is making acreage purchases outside the original block.

EAST TEXAS

Limestone County wildcat indicates gas production

Mexia, Texas.—Discovery of a gas-distillate pool from the Trinity horizon on a secondary fault zone to the east of the Mexia fault trend in Limestone County is indicated by the preliminary showing made by Murray Samuell and V. V. Waite's Barron 1, W. G. McKenzie Survey. A string of 5½-inch pipe has been cemented near the 6000-foot level with the hole bottomed at 6045 feet, to perforate and test the Lower Trinity at intervals. Production test made October 27 after bridging hole at 5612 feet and installing tubing packer at 5546 feet yielded in excess of five million feet daily. Packer gave way before gauge was taken. The well was killed, requiring 1600 pounds pressure.

Production is from either the Pettit zone, topped at 5591 feet, or Travis Peak at 5715 feet. Owners drilled the wildcat on a 5000-acre block centering between Groesbeck and Thornton.

A supply of high-pressure gas has been sought for more than a decade in the Mexia area by operators to provide cheap fuel for lease operations, and also for repressuring. Peyton Bros. et al are drilling Harris 1, located on the west edge of Mexia, to the Trinity, with support coming from local operators in need of gas.

The Texas Company's Scritchfield 1, southern Smith County wildcat, was drilling at 8040 feet in lime. It is seeking production in the Trinity.

Shelby County Gasser

Twenty-six hundred feet southwest of production at Joaquin, Shelby County, Texas, where gas-distillate production is obtained in the Glen Rose lime at the 5000-foot level, O. B. Siler and associates' Childress 1, W. M. Snider Survey, was cleaning itself into pits showing a heavy flow of wet gas. Casing was perforated from 4940 to 4960 feet and from 4874-86 feet. Casing pressure was 1800 pounds and tubing, 1600 pounds. Previously the well had shown salt water in a test at 4992-5002 feet.

East Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Joiner Area—		
Magnolia, Wright 43 (water input)	*	3893
Kilgore Area—		
Cooper et al, Compton 8, blk 151	2400	3535
Sinclair Prairie, King 63-A (366.7-ac)	4000	3591
King 45-B (337.6-ac)	5600	3515
Limestone County (Wildcat)—		
Richards & Spriegel (was Roy Handley), McDaniel 1	*	1739
Van Zandt County (Wildcat)—		
Killam et al, Republic 1	*	4626
Marion County (Pine Island)—		
J. D. Reynolds, Terry B-2, G. W. Coor sur	28	2380

*Failures; †Junked; ¶Million cu. ft. gas.

SOUTHWEST TEXAS

Cologne gets second sand; La Rosa extension likely

Corpus Christi.—Houston Oil Company opened a new producing sand for the recently discovered Cologne field of Victoria County when it completed Dietzell 1 as a large gasser through perforations 4826-32½ feet. The well had been drilled to 5171 feet, but was plugged back. When it first started to flowing into pits it showed considerable oil with wash water, but gas broke in, and when the well was shut in it was only making dry gas. Top hole pressure was 1825 pounds, shut in. The bottom-hole pressure was 2450 pounds, closed in, and 2300 pounds flowing. The regular producing sand for the field is at 2800 feet.

Perforations were being made to complete a 1½-mile extension to La Rosa of Refugio County. Morgan Gulf Oil Corporation's Thomas 1, northeast of production, cored an oil sand at 5256-60 feet and set casing at 6317 feet. The well ran an electric log to 6510 feet. At 6265-69 feet a drill-stem test recovered 150 feet of oil and a like amount of oily mud in 18 minutes.

Outpost Shows

Clara Driscoll, Nueces County, received a 4000-foot extension east when Wellington Oil Company and Pan-American Production Corporation's Clara Driscoll 1-B found pay at 5293-5303 feet. On drill stem test at 5293 to 5301 feet the well recovered 510 feet of 24-gravity oil and 410 pounds pressure in 15 minutes from what is apparently a new sand for the field. Drilling continued.

Showing oil on production tests, Gravis and Doran's Muil 2, was apparently opening a new sand for Jim Wells County. The well, 2500 feet north of crude production, tested through perforations at 5550-58 feet and showed several hundred barrels of crude per day before fresh water broke in. It was being reworked.

A new sand and a mile southeast extension for Wade City, Jim Wells County, was proved as Rowe and Delange's McNeil 1 flowed 10 barrels of distillate and 2,000,000 cubic feet of gas per day through ⅛-inch choke under 1900 pounds working pressure. Casing had been perforated at 4788-91 feet.

Riverside Extended

Stanolind Oil & Gas Company widened Riverside, Nueces County, 2500 feet to the southeast November 3 when it completed Thompson and Bland 1, as a 50,000,000 cubic foot gasser spraying some distillate from perforations at 4900-01 feet, where 10 shots had been made. While flowing through ⅛-inch choke the well showed pressures of 2025 pounds on tubing and 1725 pounds on casing. It had been drilled to 5280 feet and plugged back to 4991 feet, where 5½-inch casing was set. The test found sand with oil and gas odor at 4878-4905 feet and salt water sand 4805-19 feet, or 42 feet lower than in Clark 1, a gas producer owned by the same company.

The finding of gas to the water line is considered to virtually eliminate any possibility of crude production in this pay on the east side of the field. The third well in the Bird Island submerged field, Kleberg County, has defined that producing area. Pure Oil Company's State 1 (171), about 11,500 feet northeast of production, was stopped at 8400 feet.

New Jim Hogg County field indicated near Randado

Mission, Texas.—Jim Hogg County apparently was receiving a new oil field November 3 as Mayfair Oil Corporation was testing Isabel Guiterrez 1, wildcat 8 miles northeast of Randado. The well topped Loma Novia section at 3217 feet and found 5 feet of shaley sand with an oil and gas show. It cored 1 foot of reportedly well saturated oil sand to 3223 feet. On an 8-minute drill stem test through ⅜-inch chokes, top and bottom, seat at 3214 feet, the well recovered 300 feet of oily mud, and a good gas blow, but no pressure. The mud contained considerable oil of about 27 gravity. The test was considered unsatisfactory and another core was being taken before the well is tested again.

New sand for Southland; Sejita gets first well

San Diego.—On potential test of a new sand, Hiawatha Oil & Gas Company's Southland Life Insurance Company 3-A, Southland field, Duval County, flowed 9198 barrels of pipe line oil through 5/32-inch choke in 24 hours with pressures of 865 pounds on tubing and 1175 pounds on casing. Perforations had been made at 5355-65 feet, sand being recorded at 5353-65 feet.

Sejita, Duval County, reported its first completion in Standard Oil Company of Texas' Jack Casey 1, which flowed 10 barrels of distillate with 2,500,000 cubic feet of gas per day through 5/32-inch choke from perforations at 5334-45 feet. Pressure was 2100 pounds on tubing; casing was sealed.

Three Sparta-Wilcox tests nearing critical depths

Beeville, Texas.—Anderson-Prichard Oil Corporation and Mills Bennett Oil Corporation's D. E. Robinson 1, West Tuleta, Bee County, showed oil on drill stem tests of the String zone immediately overlying the main Wilcox sand.

The well cored a section from 7531-51 feet, of which about 5 percent was considered to be good sand with oil showing. A drill-stem test at 7131-41 feet recovered 10 feet of oil and mud, about 50 percent being 42-gravity free oil, with 305 pounds top and 1000 pounds bottom hole pressure, in 12 minutes. On November 3, a second test at 7141-51 feet recovered 30 feet of fluid, about ½ oil and the rest mud, with 245 pounds pressure in 14 minutes. The well was awaiting orders, but likely will be drilled ahead to test the big sand section in the Wilcox zone, believed to lie about 30 to 50 feet deeper.

Higher Driscoll output requested

Continental Oil Company requested a net allowable of 70 barrels daily for 18 of its wells in the Conoco-Driscoll field, Duval County, at a hearing before the railroad commission last week. The company said the wells were all producing from the Upper First Government Wells sand, and the current allowable is 51.6 barrels per well daily, net.

The total increase would be about

South Texas Completions

Company, Well & Location	Init. Prod. Bbls.	Depth
CORPUS CHRISTI DISTRICT		
Aransas County—		
Kepley Production, Brown 2 (McCampbell)	350	7368
Bee County—		
Dougherty, Hicks 6 (WC) Jose Maria Uranga Gr.	*	4538
Brooks County—		
Humble, McGill 30 (Kelsey)	500	4747
McGill 31 (Kelsey)	450	4740
Hidalgo County—		
Fohs, Sheldon 1-B (Samfordyce)	350	3103
Jackson County—		
Glasscock, Drummond 8 (Vanderbilt-West Ranch)	500	5615
Magnolia, West 24-A (West Ranch)	600	5525
West 29-A (West Ranch)	600	5560
West 30-A (West Ranch)	500	5132
Jim Wells County—		
Humble, Mull 1 (Clark-Muil)	550	5327
Meyer, Shear 2 (Magnolia City)	*	5644
Pan American, Lynn 1 (East Alice)	450	5742
Rowe, McNeill 1 (WC) 1 mi se Wade City field	¶10 & 20	5410
Nueces County—		
Stanolind, Spessard 29 (Luby)	500	5176
Winship & Dunn, Tally 1 (WC) 4 mi s Robstown	*	7032
Refugio County—		
Quintana, Heard 10 (Tomoconnor)	1250	5925
San Patricio County—		
Bay-Tex, Kenedy & Young 1 (McCampbell)	350	7178
Houston, Fee 4 (East White Point)	750	5671
Killam, Taft 4 (East White Point)	500	5605
Plymouth, Welder 113-C (Plymouth)	600	6562
Victoria County—		
Gulf, Traylor B-26 (Heyser)	500	5490
SAN ANTONIO DISTRICT		
Bexar County—		
S. K. & C. Production, Barker 1-A (WC) Section 58	5	660
Caldwell County—		
Ruby, Putnam 2 (Luling)	15	2092
Putnam 3 (Luling)	*	2135
Guadalupe County—		
Bluhawk, Fee 4 (Darst Creek)	120	2596
Humble, Wilson 8 (Darst Creek)	150	2632
Medina County—		
Mitchell, Haby 2 (Dunlay)	temp. abnd	200
LAREDO DISTRICT		
Duval County—		
Cox & Hamon, Cuellar-Points 14 (Hoffman)	120	2679
Cuellar-Points 17 (Hoffman)	80	2683
Government, Lundell 36 (Lundell)	81	1550
Graham, Webb 4 (Government Wells)	¶10	1561
Harvey & Henderson, Drummond 2 (Government Wells)	¶2½	1355
Hiawatha, Denman 2 (Longhorn)	91	4107
Parr 29 (North Sweden)	500	4697
Southland 3-A (Southland)	500	5365
Magnolia, DCRC 42 (201) (Piedre Lumbre)	250	2167
Well 49 (Hoffman)	97	2857
Wilson 20 (Government Wells)	*	3179
Standard, Casey 1 (Sejita)	¶10 & 20	6747
Texas, DCRC 30 (190) (Cedro Hill)	35	1438
Jim Hogg County—		
Henshaw, Trevino 3-B (Colorado)	150	3025
Starr County—		
Bancroft, Guitierrez 1 (WC) Porcion 104	*	2505
Zimmermann, Wood 6 (South Ricaby)	84	1762
Zapata County—		
Buffalo, Hinnant 2-D (Mirando Valley)	37	1983
Interstate, Lopez 16 (Mirando Valley)	55	1781
Lopez C-3 (Mirando Valley)	70	1784

*Failures; †Junked; ¶Million cu. ft. gas.

350 barrels daily. The oil would go to Maritime Oil Company at Houston.

Maritime Oil Company representatives told the commission that the contract with Continental calls for 4000 barrels daily from the Conoco-Driscoll field, and more will be taken if it is available. It is used to make aviation gasoline, mineral spirits and Diesel oil. The company has been unable to obtain sufficient crude from the Plymouth field since the 15-day shutdown, and has been purchasing some oil from the University field in Louisiana.

Texas drilling permits total 173 for week

Drilling permits declined in Texas last week with 173 permits approved by the Texas Railroad Commission, 236 less than were allowed the week before.

Operators in the East Texas field were permitted to drill 13 wells, including 11 in Rusk and two in Gregg County. From the remaining portion of the East Central Texas area four locations were reported.

The Gulf Coast District led the state with 39 permits, while North Texas followed with 35 locations, including 14 in Archer County. There were 34 permits approved in Southwest Texas, and Panhandle producers listed six locations.

Permits to drill 29 new wells in West Texas were approved by the commission, including 11 in Yoakum and 10 in Ector County. West Central Texas operators reported 13 locations.

TEXAS GULF COAST

South Cotton Lake outpost makes Marginulina producer

Houston.—About ¾-mile northwest of production at South Cotton Lake, Chambers County, J. R. Turnbull's Kirby Petroleum Company 1, Chambers County School Land Survey No. 3, came in flowing 10 barrels of 34 gravity oil per hour through ¼-inch choke from Marginulina sands at 6430 feet. Tubing pressure was 150 pounds and casing pressure was 700 pounds. Some are classing this strike as a new field for Chambers County, while others state it is an extension. The well may be cut off from South Cotton Lake field by a large fault or graben.

On the northwest side of League City, Galveston County, Phillips Petroleum Company was still perforating casing in Wimhurst 1 around 10,630 feet and squeezing the perforations with cement to shut off salt water sands to make a production test which may open a new producing horizon for the field.

On Chapel Hill prospect in Washington County, Sunray Oil Company has announced location for Lockhart 1, 466 feet from the south line and 466 feet from the west line of a 402-acre tract in the G. Kuykendall Survey.

Old Ocean Flank Well

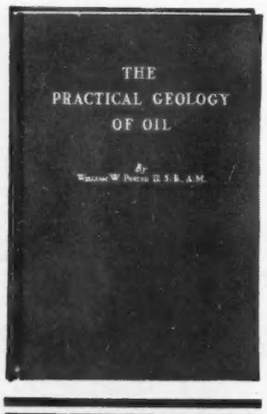
On the northeast side of Old Ocean field, Brazoria County, Sun Oil Company has completed Borsodi 2 in the First Armstrong sand at 9752 to 9786 feet. It is flowing 348 barrels of fluid daily, 40 percent salt water, through a ¼-inch choke with a tubing pressure of 700 pounds.

Another wildcat will be drilled on Needville prospect, Fort Bend County, where a number of deep dry holes have been drilled. Link & Mayo have announced location for Foss 1, 330 feet from the northwest line and 330 feet from the northeast line of H.&T.C. Survey, Section 63.

Hebert & Smith are completing Broussard Trust 1 at South China, S. Mills Survey, Jefferson County, as one of the best wells yet brought in there. The well was drilled to 7886 feet in oil sand, topped at 7878 feet. Seven-inch casing was set at 7875 feet and after setting screen and liner the well came in flowing 190 barrels of 37.7 gravity oil daily through a ⅛-inch choke with a tubing pressure of 1160 pounds and a casing pressure of 1450 pounds.

North of Satsuma and about 4 miles northwest of Fairbanks, Harris County, Dick Schwab has abandoned Robertson 1 at 6597 feet after coring salt water sands from 6584 to 6597 feet. At one time the test was thought to be running higher than wells at Fairbanks.

On the Rosenberg prospect, Fort Bend County, Magnolia Petroleum Company's Huntington 1, H. Scott League, was coring below 5279 feet in shale at the close of the week after



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Texas Gulf Coast Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Ace—		
Shell, Kirby-West 1	288	7854
Aldine—		
E. C. Hankamer, Harigrove 1	*	7235
Anahuac—		
Humble, Johnson 31-X	591	7119
Cedar Point—		
Standard of Texas, State 24-118	220	6010
Clear Lake—		
Humble, Humble-West Fee C-23	480	5908
Cotton Lake—		
Humble, Casey C-1	611	6492
Hastings—		
C. H. Alexander, Fee 3	660	6123
Hull—		
Houston Prod. Co., Hannah 9	508	5323
Humble—		
Humble, O'Connor 4	*	4335
Louise—		
Housh & Thompson, Jones 1	*	6557
Lovall Lake—		
Humble, Broussard Trust 7	168	7790
Magnet—		
Grey & Wholf, State 5-1	144	5563
Manvel—		
Texas Co., Hogg 90	280	2950
Markham—		
Hamil & Hamil, Sisk 3	*	2405
Martha—		
Stanolind, Charzan 1	311	8164
Old Ocean—		
Harrison & Abercrombie, Armstrong 6	250	10,435
Mid-Continent, Chenault 2	359	10,525
Pickett Ridge—		
J. B. Ferguson, Pierce Estate 3	86	4682
Segno—		
Gulf, Wing 4	517	5242
Humble, Kirby B-X-17	292	8164
Spindletop—		
Stanolind, McFadden 153	*	3550
Withers—		
Texas Co., Pierce Estate C-64	454	5544
Harris County—		
Dick Schwab, Robertson 1, nw of Fairbanks, A. Lawson sur	*	6597

*Failures; †Junked; ¶Million cu. ft. gas.

coring salt water sands at 5265 to 5269 feet.

Three miles south of El Campo, Wharton County, S. G. Harrison's Kountz 1, E.T. R.R. Survey, was drilling in shale at 5704 feet after coring broken sandy shale formation showing water at 5146 to 5156 feet, 5157 to 5176 feet, 5177 to 5185 feet and from 5189 to 5198 feet.

Nocona order

The Texas Railroad Commission has issued an order fixing proration on acreage and per well for Nocona (Rogers) field, in Montague County.

The new order applies to all horizons which have been or may be discovered in the field, and allows 20 acres to be assigned to one well.

LOUISIANA GULF COAST

Barataria wildcat produces from Miocene at 8214 feet

Lake Charles.—The California Company's Adams Rutley 1, Section 2-16s-23e, Barataria prospect, Jefferson Parish, last Friday came in flowing 7 barrels of 36.8-gravity oil per hour through 1/8-inch choke from 28 perforations in Miocene at 8204-14 feet. The pressures were around 1250 pounds and no salt water was showing. Rutley 1 previously was drilled to 12,225 feet.

Shell Oil Company may open a new oil field at Happytown, St. Martin Parish. Iberville Land Company 1 attempted a 15-minute drill-stem test at 9738-53 feet, but the seal failed to hold. However, when the drill stem was recovered the operators had 300 feet of oil and mud and a 3300-foot water cushion. No pressure was shown. At the end of the week the hole was being conditioned for another test.

To Test at LaPlace

Pan American Production Company will make a production test at Mill 1, LaPlace, in unproductive St. John The Baptist Parish next week. Mill 1 is running 7-inch casing to 10,175 feet. Plans are to perforate around 10,000 feet, where a gas sand showed on electric log. If this horizon is not productive, hole will be plugged back to test the 8900-foot sand, where a drill-stem test some time ago showed distillate, or to another around 8112 feet, where an oil sand was cored.

Running High

Southeast of production at Villa Platte, J. K. Hughes' Ortegio 1, which was abandoned some time ago at 9100 feet and then worked over and carried deeper, was coring sandy shale in the Wilcox at 10,260 feet. It logged top of Wilcox around 9900 feet and had a sand with a show of gas and distillate around 9965 feet. Another sand cored at 10,120 to 10,160 feet carried saturation. Ortegio 1 is said to be about 90 feet higher on the Wilcox sand than Continental Oil Company's Haas 1, first Wilcox producer for the field, at 10,085 feet. Also on the southeast side of the field, Continental Oil Company is making a Wilcox production test on Coriel 2; casing was perforated around 10,180 feet.

At Bateman Lake, St. Mary Parish, The Texas Company has logged several new sands in St. Mary Parish School Board 1. At the close of the week it was coring sand and shale with a show of oil at 11,560 feet. From 11,169-79 feet a gas sand was encountered, from 11,516-19 feet was sand with a show of distillate, and from 11,554-59 feet was sand and shale with an oil show.

Shell Oil Company's outpost test, Michel 1, West Lake Verrett, St. Martin Parish, was shut down at 11,678 feet in shale after sticking drill pipe. This wildcat has held interest of operators since sand with a slight show of oil was logged at 11,300 feet. Seven-inch casing is set at 10,599 feet, above which no shows were reported.

The first location for Vermilion Bay field, Iberia Parish, since it was discovered in July, 1939, is The Texas Company's Vermilion Bay B-4, 13,663 feet south and 16,080 feet west of SEc 20-15s-6e. The field was opened by Vermilion Bay B-3, completed at 10,131 feet. The company also is planning to work over Vermilion Bay B-2, which blew out some time ago at 9667 feet. The well probably will be carried to the deeper horizon.

J. E. Belt has made location for Thompson & Katz 1 in the Bordelonville area, northeast of Eola, Avoyelles Parish. It is in SW SE 23-2n-5e. The well is contracted to 8500 feet, or into the Wilcox. When Belt took the block he had an obligation to begin operations by November 25. Tide Water Associated Oil Company and Gulf Oil Corporation have leases in the area.

New Shallow Sand

A new shallow oil sand was picked up in The Texas Company's State Fausse Point 6 at Fausse Point, Iberia Parish, last week at 5159-65 feet. Coring continues in the sand. Another sand with an oil odor was logged at 5020 to 5030 feet.

The Texas Company has completed State Lake Mongoulois 7 in a new producing horizon at Lake Mongoulois, St. Martin Parish. The well was completed as a gas and distillate producer, making 25 barrels of distillate daily after casing was perforated with 74 shots from 9952-70 feet. Tubing pressure was 400 pounds.

On Johnson Bayou prospect, Cameron Parish, Humble Oil & Refining Company abandoned Fee Land 1 at 7117 feet in shale.

Circle shows location of latest strike in Louisiana Coast area.

South Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Baton Rouge—		
Wm. Helis, Duplantier B-3	288	6480
W. V. Bowles, Richard Community 2	144	6522
Albert McDonald, McDonald 1	240	6488
Markley & Crosby, Knox-Amiss 4	336	6477
Bay Baptiste—		
Shell, Peters 1-A	*	11,803
Bay St. Elaine—		
Texas Co., State 19	90	6502
Charenton—		
Pan American, Ecuer 4-A	*	1912
Laws 18	*	1894
Knisley Oil Co., LeBlanc 7	8	1795
East Hackberry—		
Texas Co., State 27-B	*	7843
Eola—		
Amerada, Glaze 3	780	8556
Marchive 8	617	8580
Golden Meadows—		
Texas Co., Falgout 2	840	7952
Theriot 1	260	6602
Jennings—		
Carter, Perrin & Brian, Martel 1	*	1916
Stanolind, Crowley Oil & Mineral Co. 115	216	7639
Lake Mongoulois—		
Texas Co., State 7	25	9970
Ville Platte—		
Continental, A. M. Fontenot 4	312	9030
A. M. Fontenot 1	336	9057
Cameron Parish—		
Humble, Fee Land 1, Johnson Bayou area	*	7117
Livingston Parish—		
Humble, Great Southern Lbr. Co., 1, Springville area	*	9371

*Failures; †Junked; ‡Million cu. ft. gas.

NORTH LOUISIANA

Hosston extension test flows 20 barrels hour

Shreveport.—Temple Oil Company's Bostick 1, NE SE SW 13-22n-16w, 1½ miles north of the Hosston shallow field, Caddo Parish, was completed last week flowing 20 barrels of oil per hour through 22/64-inch tubing choke from Tokio at 2558 feet. With elevation of 211 feet this test topped the Nacatoch at 1156 feet and logged the chalk from 1630 to 1870 feet. After flowing for several hours it was shut in for storage and to install new connections.

Five-inch casing was run in Lisbon Exploration Company's Vaughan 1, NW NE 36-21n-5w, Lower Marine test at Lisbon, which drilled to 8901 feet in Lower Marine, topped at 7850 feet. Thirty-five feet of sand in 2 sections was reported but whether the well will produce oil or distillate awaited final testing.

Stanolind Oil & Gas Company was running final casing in Dillon 131, NE SE 14-21n-15w, deep test in the shallow Pine Island field, Caddo Parish, after drilling to 10,167 feet, the ninth hole in the North Louisiana-South Arkansas-East Texas territory to pass 10,000 feet. Electric log has been run.

Seven miles southeast of Shreveport field production, David J. Crawford's Lloyd 1, SWc 29-17n-13w, Caddo Parish, drilled at 4823 feet after finding the Jeter sand (productive at Sligo, Bossier Parish) tight. This test logged anhydrite from 4387 to 4616 feet.

Two miles northeast of production in the shallow Waskom field, Arkansas Fuel Oil Company's W. M. Bell 1, SWc 6-17n-16w, which showed for a 15 million foot gasser in the Pettet, drilled sandy shale at 6132 feet.

A considerable leasing play has developed in southern Sabine Parish, as a result of a supposed shoreline indicated on the south flank of the Sabine Uplift, in an area where Shell Oil Company secured a large lease spread for an early deep test. The play has extended into Sabine County, Texas, where H. L. Hunt is leasing around the S. Smith and H. Nichols surveys. In the same county near Pineland, Charlotte Oil Company is adding to a 5000-acre block. In Sabine Parish, between the Converse and Zwolle fields, B. F. Phillips has taken a block around Section 13-9n-12w, for a 3600-foot test.

Tide Water Associated Oil Company has assigned to Hunt Oil Company several hundred acres the former had under lease west of production in the Cotton Valley field, Webster Parish, the acreage being in Sections 29, 30, 31 and 32-21n-10w, and Sections 5 and 6-20n-10w. Recent completion of an oil well from the Lower Marine in Section 32-21n-10w placed this acreage in line for oil production from this zone.

North Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Bossier Parish (Bellevue)—		
Oil Finance Corp., Arkansas Fuel 8, 15-19n-11w	12	408
Caddo Parish (Pine Island)—		
R. L. Hall, Caddo Levee Board 2, 26-21n-16w	25	954
A. R. Hancock, Standard 7, 18-21n-15w	*	1720
G. H. Neighbors, Thrash 1, 36-21n-16w	30	1585
Rembert & Morgan, Hudson 1, 11-20n-16w	200	1600
J. G. Strahan et al, J. J. Hart A-2, 29-21n-16w	600	2384
Webster Parish (Cotton Valley)—		
Mid-States Oil Corp., Coyle 1, 20-21n-10w	750	8712

*Failures; †Junked; ¶Million cu. ft. gas.

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ARKANSAS

First failure in months defines Magnolia northeast

El Dorado, Ark.—The northeast limits of Magnolia, Columbia County, which has 71 oil wells producing from the Smackover lime, were defined last week when Atlantic Refining Company's Spain B-1, NW SW 18-17-19, 1 location outside production, was abandoned in salt water at 7660 feet. It logged dense lime to 7647 feet and the rest of the hole carried salt water. This is the first failure in this field since its early days in the spring of 1938 when the north limits were defined.

Another Smackover lime wildcat proved disappointing when Delta Drilling Company and Fohs Oil Company's Grace 1, SE SE 31-17-14, Union County, showed 7 stands of mud and 36 stands of salt water in a 15-minute drill-stem test from 6701-26 feet in the Smackover lime. Half-inch chokes were open at top and bottom. The test was coring ahead, having failed in an attempt for another drill-stem test. The Buckner phase of the Smackover lime was logged at 6628 feet, higher than the same contact in Fohs Oil Company's abandoned test in the Smackover lime in Section 5-18-14.

Rigging was under way for a long-awaited Smackover lime test on a geophysical prospect in Union County—Barnsdall Oil Company's Cameron 1, C SW NW 36-19-17.

Top of James lime was logged by 2 deep geophysical wildcat prospects of Standard Oil Company of Louisiana in Columbia County. Petty 1, SE SE 4-17-21, drilled shale at 4855 feet after topping James lime at 4192 feet and Warnock 1, C NE NE 36-16-20, drilled shale at 4675 feet after picking up James lime at 3825 feet. Elevation of the former is 263 and of the latter, 376 feet.

Arkansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Columbia County (Magnolia)—		
Atlantic, Spain B-1, 18-17-19	*	7660
Nevada County (Troy)—		
Berry Asphalt Co., Calloway & Howell 1, 5-14-20	*	1192

*Failures; †Junked; ¶Million cu. ft. gas.

NEW MEXICO

Western Lea County gets active after wildcat hits

Hobbs, N. M.—More prospecting is in store for western Lea County as result of completion of Frank Farley et al's State-Texaco 1-A for a large initial from lime at 2627-29 feet. The most popular areas with wildcatters is near failures that revealed structure with good porosity in the lime, as indicated by the large yield of water. These factors were the basis of the strike by Farley et al.

Culbertson & Irwin have spudded J. S. Lea 1, C NE NE 8-19s-32e, 1¾ miles northeast of English et al's Miller 1, recent 4016-foot failure that passed up oil show in the upper lime at 2775-85 feet, followed by hole full of water.

Farley et al's discovery remains shut in for pumping unit after having swabbed 1050 barrels of oil in 17½ hours. Argo Oil Corporation's State-Texaco 1, west offset, was drilling at 1500 feet. Westlea Oil Company's Cleveland-Texaco 1-C, south outpost, was drilling at 850 feet. Drilling is under way on one of the quartet of tests authorized recently for the northern Eddy County pool opened by B. H. Nolen et al's Isles 1-A, SEc 17-16s-29e. Dodson Drilling Company's McElreath 1, SWc 3-16s-29e, was drilling at 110 feet. The discovery was deepened from pay at 1803-20 feet to 1824 feet, and is rated at 80 barrels of 36-gravity oil daily on pump.

Nominal reduction in the daily quota of prorated wells in New Mexico was expected to be authorized by the Oil Conservation Commission in order to restrict the output of the state to the 111,000-barrel level set by the Bureau of Mines. Production restrictions are confined to the flush fields in Eddy and Lea counties. The November schedule will retain a greater top allowable in Eddy County because of 3000 barrels daily being nominated for export.

Six areas in Lea County accounted for 8 new tests the past week, as compared to 11 authorizations the previous week.

Skelly Oil Company's State 3-O, C W½ SW SE 31-16s-37e, west edge producer for Lovington, encountered bottom hole water in deepening to 5032 feet. It has been plugged to 4955 feet after testing 865 barrels natural through ¾-inch tubing choke, with 2 percent water. This well previously flowed 630 barrels natural when tested at 4930 feet, with an elevation of 3819 feet.

The southwest edge of Vacuum contributed another natural producer when The Texas Company's State 3-V, C SE NW 34-17s-34e, gauged 137 barrels oil in 6 hours from broken pay at 4485-4700 feet, with an elevation of 4048 feet. More acreage is due to be proved in this sector. The above company has 5 tests scheduled for completion within a week, and Magnolia Petroleum Company has 3.

Extension of Maljamar, western Lea County, to the southeast occurred when Barefield and Brooks' Walker 1, C SE NE 5-18s-32e, filled 550 feet with oil in 14 hours from an upper break in the lime at 3695 feet. It has an elevation of 3858 feet. Casing will be cemented on top of this zone before deepening. The field has attracted a substantial number of new operators in recent months.

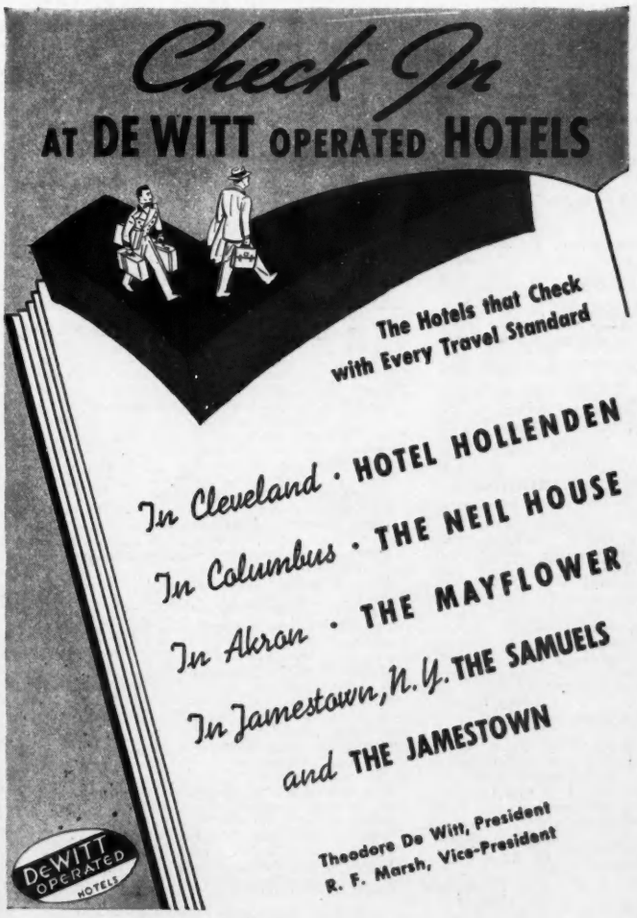
The dry gas area between Cooper and Mattix fields is to be given a new test through the starting of work by Western Gas Company on the Toby tract, C NE SE 12-24s-36e.

Continental Oil Company's State 1-L-16, C NW NW 16-18s-29e, situated on the southwest edge of the Loco Hills field, Eddy County, flowed 70 barrels of oil in 15 hours after a 500-quart nitro shot at 2452-2626 feet. The flow declined to 69 barrels daily by heads while cleaning out to run tubing.

New Mexico Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Eddy County—		
Addison Oil Co., Wilkinson 1, c ne ne 17-18s-31e	163	3180
Continental, State 1-M-2, swc se 2-18s-29e	630	2672
Republic Prod. Co., Robinson 3-B, sec 35-17s-29e	8	3302
Yates et al, Brainard 1, swc 3-18s-29e	948	2593
Lea County (Hardy)—		
Gulf, McCormack 8, c se ne 32-21s-37e	81	3765
Magnolia, Carson 8, c se nw 33-21s-37e	427	3775
Lea County (Langlie)—		
Anderson-Prichard, Langlie-Jal 3, sw nw ne 11-25s-37e	168	3433
Lea County (Lovington)—		
Stanolind-Amerada, Caylor 1, c nw sw 6-17s-37e	70	4960
Lea County (Vacuum)—		
Texas Co., State 3-V, c se nw 34-17s-34e	548	4700

*Failures; †Junked; ¶Million cu. ft. gas.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MICHIGAN

Grand Rapids extension or new area in Kent County

Mt. Pleasant, Mich.—Grand Rapids field, Kent County, either was extended three-quarters of a mile south or a new pool on the same trend opened last week. Fisher & McCall's Pratt 1, SE SE NE 23-6n-12w, Wyoming Township, ¾ mile south of a 100-barrel isolated well, filled up 1600 feet at 1905 feet, with Traverse top at 1875 feet. Another well, in the same area but north of Pratt 1 flowed 220 barrels by heads in 12 hours after acid.

Structurally low wells and dry holes between the main field and the new tests to the south probably indicate an extension cut with a saddle, a fairly common condition in Michigan's lime zones.

Silver Creek Oil Company continued to test Flynn 1, Section 23-5s-16w, Cass County wildcat, in Traverse at 808 feet. It carried 20 feet of free oil natural.

Sun Oil Company shut down at Horner 1, Section 2-24n-5w, Missaukee County wildcat, at 3222 feet. It topped Dundee at 3138 feet and had a show of oil at 3139 feet. At 3222 feet it filled up 400 feet with water in 2 hours.

State proration was lifted, effective November 1, in Columbia Township, Van Buren County and Old Salem field, Allegan County. Investigations showed that water encroachment had reached a point where proration could be of no benefit. Gas was dissipated from most of the properties before proration went into effect.

As of October 20, only 25 out of 87 wells in the Columbia field could make the 100-barrel allowable and in Old Salem none of 140 wells could make the allowable. Water was reported rapidly encroaching in the producing formation. Columbia produced 114,000 barrels in October and 134,000 barrels in September. Old Salem produced 77,500 barrels in October and 81,718 barrels in September.

Removal of Columbia and Old Salem from proration left only three fields in the state under proration. Bloomingdale was taken off proration two months ago for the same reason.

Michigan Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Allegan County—		
McKenna & Mees, Madejezyk 1, sw nw nw 36-2n-16w	*	1258
Daily Crude Oil Co., Lamoreaux 1, nw nw nw 8-3n-15w	*	1460
W. R. Borough, Shuck 2, nw sw nw 2-4n-13w	250	1682
Socony Vacuum, Wiest 1, nw sw ne 2-4n-13w	75	1694
Voorhees Oil Co., Loew 2, sw se sw 3-4n-13w	200	1628
Black Rock Oil Co., Kipen 2, ne sw nw 23-4n-13w	156	1588
J. K. Martin, Lortin 1, nw se nw 12-3n-16w	*	1382
Arenac County—		
W. E. Ross, Kainder 2, c ss nw 10-20n-4e	¶¼	1130
Calhoun County—		
Mar-Cal, Woods 1, sw sw se 13-2s-6w	*	2015
Clare County—		
Taggart Bros., Perkins 20, c se 18-18n-5w	¶10	1485
Kalamazoo County—		
Smith Pet. Co., Rowe 1, sw nw sw 8-3s-9w	*	1422
Kent County—		
W. H. Thourlby, Boyle 1, nw se se 6-7n-9w	*	2391
Gene Hilliard, Coeling 1, sw se se 29-7n-12w	450	1898
Smith Pet. Co., Thurkettle 2, nw se sw 29-7n-12w	125	1910
O'Sullivan 2, nw nw sw 30-7n-12w	850	1899
Sullivan 4, nw ne sw 30-7n-12w.	600	1908
Plaster Co. 2, se se nw 34-7n-12w	12	1940
Gilbert 6, se ne sw 4-6n-12w	120	1785
Gordon Oil Co., Goodheart 1, ne sw ne 30-7n-12w	100	1929
C. E. Weller, McKay A2, se se nw 30-7n-12w	350	1914
Ide Dev. Co., Burgess 1, ne nw ne 32-7n-12w	60	1925
Reinham 4, nw nw se 33-7n-12w.	700	1925
Swanson Oil Co., Decker 1, sw nw se 14-6n-12w	220	1892
Ottawa County—		
Twin Drilling Co., Park 1, ne se ne 25-7n-13w	1500	1903
Park 2, nw se ne 25-7n-13w	900	1892
Marx & Schers, Shaw 1, ne se ne 36-7n-13w	70	1871
Saginaw County—		
Darke Bros., Butler 1, nw nw ne 11-11n-2e	*	3926
Van Buren County—		
Bridger Basin, Ulrath 4, se ne nw 28-2s-16w	*	1007
Brock Reed, Cooley 1, se se se 12-1s-15w	5	1205
Clapsaddle et al, Pepper 6, nw ne ne 23-1s-15w	100	1191

*Failures; †Junked; ¶Million cu. ft. gas.

ROCKY MOUNTAIN STATES

Light oil discovery seen for North Geary Dome test

Casper, Wyo.—Prospects for a light oil field appeared bright last week as Continental Oil Company cored a heavily saturated section in the Muddy sand on North Geary Dome. The core was recovered from 6380 to 6383 feet in McGrath 1, CNW SW 15-34n-78w, Natrona County. With bottom at 6406 feet, drill-stem test is being made from 6373 feet.

North Geary structure embraces 6560 acres within the unitized area, and has 800 feet of closure. The structure lies immediately to the south and east of Midway Dome where light oil production is developed in the Dakota series.

Six miles west of North Geary is Cole Creek where General Petroleum Corporation recently recompleted Government 1, NW NW SE 21-35n-77w for 400 barrels daily in Dakota at 8015 feet.

E. T. Williams Oil Company et al are moving in heavy equipment to complete State 1, NEc 36-25½n-115w, on Wyoming Anticline, Lincoln County. The hole has been cleaned out to 1937 feet, and 10-inch is to be set at 1933 feet to shut off upper formation water and test a showing of light oil in Park City formation, containing the Embar lime. Not more than 400 feet of new hole is expected to carry through the Embar, and the test is prepared to drill to 4000 feet through Madison lime if commercial production is not encountered at lesser depths. Wyoming Anticline, because of light oil showing encountered, embracing more than 12,000 acres within structural contour and just 8 miles from pipe line outlet, is being watched with interest.

Mountain States Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
COLORADO		
Boulder County (El Dorado)—		
Continental Oil Co., Borra 1, se ne sw 5-1s-69w	*	6381
MONTANA		
Glacier County (Cut Bank)—		
Glacier Production Co., Barrington 2, cnw ne 19-35n-5w	168	2832
Texas Co., Morrison 8, lot 7, 22-35n-6w	123	2929
Mose Wagner, Tribal 2-173, ne se se 12-32n-6w	*	520
WYOMING		
Carbon County (Wertz)—		
Sinclair-Wyoming Oil Co., Wertz 13, nw nw 7-26n-89w	2726	6230
Niobrara County (Lance Creek)—		
Argo Oil Corp., Elliott 10-A, se nw se 5-35n-65w	2520	5541
Weston County (Dewey Dome)—		
Osage Trust, Darrow 1, nw nw se 7-41n-60w	*	2340

*Failures; †Junked; ¶Million cu. ft. gas.

CALIFORNIA

Major extension promised by Greeley field outpost

Los Angeles.—Two miles northwest of production, General Petroleum Corporation's Sullivan 1, Greeley outpost, has encountered 20 feet of Vedder zone and is certain to become a major extension if not the first of a series of wells that will connect the Kern County fields of Greeley and Rio Bravo. Mechanical difficulties have delayed a production test on the 11,386-foot project which has casing set at 11,327 feet.

North of Sullivan 1 and between these two fields, Superior Oil Company's Helbing 1 was abandoned during the week after having explored to 14,020 feet in what was called the South Rio Bravo formation.

Wood-Callahan Oil Company may have established some sort of record at West Montebello during the week when it landed 7430 feet of 7-inch casing in Thill 1 in 7 hours and 45 minutes.

California Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Los Angeles County (Montebello West)—		
Montebello Reserve Oil Co., Reservoir 1	575	7634
Standard, Braun 6	170	7650
Union, Howard & Smith 10	450	7615
Los Angeles County (Wilmington)—		
F. E. Fairfield, No. 1	250	3098
Roy Morgan, Ruth 1	100	3420
Royalty Service, No. 16-7-1	182	3610
Signal O&G Co., Signal-LB-SP (LB) 4	550	4178
Union Pacific, UP (LB) 118	566	3678
UP (LB) 120	1504	4021
Kern County (Coles Levee)—		
Union, KCL 58-11	750	10,166
Fresno County (East Coalinga Eocene)—		
Superior, Coalinga Fee 5	3294	8249
Kern County (Kern River)—		
D. B. K. Co., No. 11	4	450
Hast Oil, Kern 6	15	542
Fresno County (Kettleman No. Dome)—		
Standard, No. 2-19J	1005	10,950
No. 61-27Q	1350	8415
Kern County (Midway Sunset)—		
Merritt-Annex Oil, Fried 8	no est.	2495
Kern County (Strand)—		
Tide Water Associated, Strand-KCL E-46-7	915	8374
Santa Barbara County (Santa Maria Valley)—		
E. H. Lomas, Reg 1	3990	5245
Ventura County (Ventura Avenue)—		
Tide Water Associated, Lloyd 66	202	6434
Kern County (Kern Front Area)—		
Crestmont Oil Co., Crawford-Hesse 1	*	3079
Kern County (Mt. Poso)—		
Ring Oil Co., Blackfoot 4	*	1926

*Failures; †Junked; ¶Million cu. ft. gas.

WILDCAT REPORT
New Starts and Completions

STATE	WILDCATS STARTED		WILDCAT TESTS COMPLETED							
			Total		Oil		Gas		Dry	
	This Week	This Year	This Week	This Year	This Week	This Year	This Week	This Year	This Week	This Year
Alabama	...	5	...	2	...	...	...	...	...	2
Arkansas	...	34	...	22	...	2	...	...	...	20
California	4	183	...	76	...	20	...	2	...	54
Colorado	...	3	1	2	...	...	...	...	1	2
Florida	...	3	...	1	...	...	...	...	...	1
Georgia	...	3	...	1	...	...	...	...	...	1
Illinois	9	520	14	403	...	27	...	2	14	374
Indiana	4	65	2	40	...	9	...	1	2	30
Kansas	6	220	4	204	...	53	...	9	4	142
Kentucky	1	60	2	28	...	8	...	...	2	20
Louisiana	1	117	1	91	...	13	...	3	1	75
North Louisiana	...	39	...	27	...	3	...	1	...	23
South Louisiana	1	78	1	64	...	10	...	2	1	52
Maryland	...	1	...	...	...	...	...	...	...	...
Michigan	4	229	6	291	...	21	...	...	6	270
Mississippi	1	23	...	10	...	1	...	...	...	9
Missouri	...	57	2	33	...	...	...	3	2	30
Montana	...	5	...	3	...	...	...	...	...	3
Nebraska	...	1	...	1	...	...	...	...	...	1
New Mexico	...	36	...	27	...	1	...	1	...	25
New York	...	1	...	4	...	1	...	1	...	2
Oklahoma	2	153	...	151	...	18	...	7	...	126
Ohio	...	4	...	10	...	1	...	...	...	9
Pennsylvania	...	3	...	6	...	...	...	1	...	5
South Dakota	...	2	...	2	...	...	...	...	...	2
Texas	30	949	19	1,003	1	93	1	21	17	889
East Texas	1	108	2	99	...	3	...	1	2	95
North Texas	7	120	6	193	...	26	...	1	6	166
Gulf Coast	7	101	1	83	...	8	...	1	1	74
Panhandle	...	11	1	10	...	...	...	1	1	9
South Texas	13	443	6	453	1	36	1	15	4	402
West Texas	2	166	3	164	...	19	...	2	3	143
Utah	...	1	...	...	...	...	...	...	...	...
West Virginia	...	2	...	1	...	...	...	...	...	1
Wyoming	1	7	...	4	...	...	...	...	...	4
Total U. S.	63	2,687	51	2,426	1	268	1	51	49	2,107

ARKANSAS

FIRST REPORTS

Union County—Barnsdall Oil Co.'s W. M. Cameron 1, c sw nw 36-19-17, rig.

CALIFORNIA

FIRST REPORTS

Los Angeles County—Fernando Oils, Ltd.'s Holmes 1, Section 18-2n-16w, Chatsworth area, grade.

Kern County — General Petroleum Corp.'s Farrand 1, c sw ne 12-29-25, northwest area of Greely, lcn.

Contra Costa County—Tassajara Oil Corp.'s Rasmussen 1, sw ne 9-2s-1e, San Ramon area, rigging rotary.

Colusa County—Empire Oil & Gas Co.'s Medical 1, se nw 27-14n-5w, Wilbur Springs, lcn.

COLORADO

COMPLETIONS

Boulder County—The Continental Oil Co.'s Borra 1, se ne sw 5-1s-69w, near Boulder, central Colorado, Hygiene sands at 4395-6367 ft, abnd 6381 ft.

ILLINOIS

FIRST REPORTS

Bond County—Bond Oil Co.'s De Mayo et al's) Vagel 1, c e½ nw nw 21-6n-4w, dk.

Clay County—Carl Robinson et al's Bryant 1, ne se ne 7-2n-5e, spud.

Cumberland County—Union Products Co.'s Cox 1, c w½ nw ne 29-9w-9e, dr below 1620 ft.

Hamilton County—Carl Robinson's Porter 1, sw se sw 17-7s-7e, dk.

Marion County—John Sappington's Austin 1, ne ne nw 22-2n-1e, dk for Devonian test.

Montgomery County—Boren & Burrough's T. N. Jett 2, 405 ft from north line and 1765 ft from west line, Section 30-8n-3w, spud.

Wabash County—Marvel Oil Co.'s Laura Bell 1, ne nw sw 11-2s-13w, waiting on cement with surface casing set.

Washington County—John Pugh's Kroeger 1, nw nw se 28-3s-1w, dr 1300 ft, a Devonian test.

White County—Eason Oil Co.'s C. C. Hughes 1, ne ne nw 19-4s-14w, rigging up rotary.

COMPLETIONS

Bond County—Jarvis Bros.' Zebb 1, ne nw se 21-5n-3w, Central tnp, top Devonian 2317 ft, abnd 2456 ft.

Clark County—Patmin Production Co.'s Ingersoll 1, nw sw se 29-11n-14w, Wabash tnp, abnd 1724 ft.

Effingham County—F. Seawright's F. Wilson 1, ne nw se 31-6n-5e, Mason tnp, top McClosky 2486 ft, abnd 2539 ft. Phillips Petroleum Co.'s D. Overbeck 1, nw nw nw 31-8n-7e, St. Francis tnp, top Fredonia 2533 ft, abnd 2853 ft. N. M. Downing et al's H. Alwerdt 1, nw nw se 8-6n-5e, Mason tnp, abnd 2500 ft

Hamilton County — Kingwood Oil Co.'s Schnuck 1, se ne ne 2-4s-6e, Crouch tnp, abnd 3550 ft.

Lawrence County — Ann Bell Oil Co.'s Wright 1, ne nw se 21-2n-13w, Lukin tnp, top Aux Vases 2635 ft, abnd 2770 ft.

McDonough County — Fowler, Hunter & Cruse's E. Stoneking 1, c se sw 34-4n-3w, Bethel tnp, top Niagaran 657 ft, abnd 700 ft.

Marion County — Wallace Wright et al's Bryant 1, c s½ ne ne 4-1n-1e, Centralia tnp, abnd 1860 ft. Florence Oil Corp.'s Suggs-Meeker 1, nw nw nw 11-2n-1e, Sandoval tnp, top St. Louis 2088 ft, abnd 2092 ft.

Perry County—Gilliam et al's Brostmeyer 1, sw se ne 5-5s-3w, Pinckneyville tnp, top Benoist 1360 ft, abnd 1610 ft.

Washington County—Armer et al's Norwicki 1, ne ne sw 33-3s-1w, Dubois tnp, top Benoist 1333 ft, abnd 1348 ft.

White County—Pace & German's Hon 1, sw sw sw 33-3s-11e, Gray tnp, top Aux Vases 2800 ft, abnd 3100 ft. Ben Nation's C. O. Garrett 1, se se sw 12-4s-8e, Mill Shoals tnp, top Fredonia 3462 ft, abnd 3554 ft. Ivan White et al's H. C. Ford 1, c w½ nw se 34-4s-14w, Phillips tnp, top Cypress 2576 ft, abnd 2990 ft.

INDIANA

FIRST REPORTS

Dubois County—Apex Drilling Co.'s Clara Grant 1, ne sw ne 28-1s-3w, dk.

Knox County—Michel Bros.' Jasper Schloot 1, 250 ft from south line and 250 ft from east line, se se 2-5n-7w, loc.

Vandenburg County — Volkman's Heldt 1, 2340 ft from south line and 2440 ft from west line, Section 18-7s-11w, dr 1000 ft. Hawkins' F. W. Force 1, nw sw sw 7-7s-11w, loc.

Warrick County—Gulf Refining Co.'s D. S. Reed 1, 661 ft from north line and 982 ft from east line ne ne 12-6s-9w, loc.

COMPLETIONS

Knox County—Hart, Hart & Williams' G. L. Hart 1, c ne sw 28-5n-7w, Vigo tnp, abnd loc.

Vandenburg County—John L. Drake's K. Keif 1, 200 ft from north line and 300 ft from west line nw 5-6s-10w, top Mansfield sand at 1065 ft, abnd 1100 ft.

KANSAS

FIRST REPORTS

Butler County—Pechin et al's Hartnebower 1, nwc 16-29-6e, otd 325(ft, co 2400 ft.

Cowley County—Allred's Peninger 1, c ne nw 35-32-5e, dr.

Johnson County—OK Supply et al's Gardner 1, sec ne 4-14-22e, machine.

Leavenworth County—Oko Oil Co.'s Stephanson 1, sec ne 4-11-22e, machine.

Marion County—Polhamus et al's Noone 1, c sw ne 18-18-3e, rig.

Rice County—Garden et al's Misener 1, c n½ nw ne 21-21-7w, rig.

COMPLETIONS

Greenwood County—Henderson et al's Smith 1-A, nwc se 8-24-11e, ½ mi e Gaffney pool, top Bartlesville 1768 ft, abnd 1862 ft. Spencer's Edwards 1, nwc sw 32-24-12e, 2½ mi sw Virgil pool, top Mississippi 1793 ft, abnd 1903 ft.

Rooks County—Continental Oil Co. et al's Berridge 1, nwc sw 8-9-17e, ¼ mi n Nyra pool, top Viola 2780 ft, top Wilcox 2865 ft, top Arbuckle 2940 ft, abnd 2981 ft.

Woodson County—Henderson et al's Piper 2, nwc se 19-23-15e, s .Van Noy pool, top Mississippi 1536 ft, abnd 1550 ft.

KENTUCKY

FIRST REPORTS

Christian County—Dr. W. L. Wood's Fee 1, 3100 ft from north line and 1000 ft from west line, Section 5-E-24, dr 525 ft.

COMPLETIONS

Breckenridge County — Lion Oil Refining Co.'s Fannie McCoy 1, 2700 ft from north line and 400 ft from east line, Section 16-P-38, abnd 1600 ft.

Webster County—Smith & Toomes' O. H. Parker 1, Beech Grove District, abnd 1352 ft.

SOUTH LOUISIANA

FIRST REPORTS

Cameron Parish—Phillips Pet. Co.'s Miami Corp. 1, Catfish Lake area, cse 11-14s-6w, lcn.

COMPLETIONS

Acadia—Providence Oil Co.'s John Estate 1, West Crowley area, 1650 ft s of e line and 330 ft s of w line of 98-ac tract off e side of J. John 242-ac tract, sec 37-10s-11e, abnd 8277 ft.

MICHIGAN

FIRST REPORTS

Allegan County — Blood & Hendershott's Know 1, nw se nw 4-2n-16w, lcn.

Cass County—Michi-Cal Oil Co.'s Robinson 1, sw sw nw 16-5s-14w, rig.

Muskegon County—Lentz & Miller's Guerne 1, nw nw nw 28-10n-15w, lcn.

Ottawa County—Columbia Oil & Gas Co.'s Trilck 1, ne nw ne 31-9n-13w, dr.

WILDCAT COMPLETIONS

Allegan County—McKenna & Mees' Madejezyk 1, sw nw nw 36-2n-16w, Traverse 1194 ft, abnd 1258 ft. Daily Crude Oil Co.'s Lamoreux 1, nw nw nw 8-3n-15w, abnd 1460 ft. J. K. Martin's Lortin 1, nw se nw 12-3n-16w, abnd 1382 ft.

Calhoun County — Mar-Cal Development Co.'s Woods 1, sw sw se 13-2s-6w, abnd 2015 ft.

Kalamazoo County—Smith Pet. Co.'s Rowe 1, sw nw sw 8-3s-9w, Traverse 1386 ft, abnd 1482 ft.

Kent County—W. H. Thourlby's Boyle 1, nw se se 6-7n-9w, Traverse 2370 ft, abnd 2377 ft.

Saginaw County—Darke Bros.' Butler 1, nw nw ne 11-11n-2e, Dundee 3157 ft, abnd 3926 ft, (owdd).

MISSISSIPPI

FIRST REPORTS

Hinds County—Byrd-Frost et al's Gaddis Farms 1, 275 ft n and w se se 12-6n-3w, moving in materials.

MISSOURI

COMPLETIONS

Bates County—Monarch Royalty Co.'s Lee 1, c sw se 11-39n-30w, temporarily abnd, top Osage 503 ft, top Chauteau 705 ft, so 738-746 ft, Mississippi lime-Arbuckle lime contact 774 ft, sw 825-830 ft, sd 1446 ft.

St. Charles County — Remington et al's

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Stewart 1, sec 14-46n-2e, top Chauteau 170 ft, top Kimmswick 255 ft, top Decorah 325 ft, top St. Peter 560 ft, abnd 600 ft.

OKLAHOMA

FIRST REPORTS

Carter County—Turner's Smith 1, ne sw se 16-3s-1w, rig.

Seminole County—Smith's Lowry 1, nwc sw 10-6n-5e, top Dolomite 4188 ft, td 4590 ft, to test Hunton lime.

NORTH TEXAS

FIRST REPORTS

Archer County—Shell Oil Co.'s E. Colgan 1, 1100 ft out of sec of J. F. Martin sur A-276, 4 mi n Megargel, dr 260 ft.

Baylor County — British-American O. P. Co.'s G. C. Holman 1, center of east 235 acres of sec 194, T&NO sur, mim.

Clay County—Harvey Drl. Co. et al's C. T. Taylor 1, 4500 ft s and 2850 ft e of nwc blk 33, Bacon sub-div of E. A. Farris sur A-153, testing o.s. 1067-74 ft.

Haskell County—K. B. Knowles et al's A. E. Pardue 1, 660 ft from s and 330 ft from w lines sec 1, SFIW Co. sur, A-475, mim.

Wise County—W. F. Holifield et al's J. Pedell 1, 450 ft from e and 660 ft from n lines Rebecca Coleman sur A-155, 2 mi e Bridgeport, sp and sd.

Young County—E. W. Hunt et al's Goss 1, 1166 ft from s and 1100 ft from e lines sec 1592, TE&L sur, testing o.s. 1212-19 ft. Jas. T. Touhy et al's Ackers 1, 330 ft from e and 1170 ft from n lines W. McClure sur A-183, dr 1250 ft.

COMPLETIONS

Archer County—Paul Atchley et al's E. A. Hausler 1, 450 ft out of sec of 167-acre tr, J. T. Standerford sur A-394, Gunsight lime 1084-87 ft, abnd in w.s. 1131-36 ft. E. G. Boardman et al's Pastusek 1, 715 ft from s and 150 ft from w lines e½ sec 38, Meade Pasture, abnd in shale 1520 ft.

Jack County—E. D. Willis et al's Roney 1, 200 ft from n and 150 ft from e lines TE&L sec 3326, abnd 413 ft.

Young County — Rhea Anderson et al's Bernhardt 1, 150 ft out of sec TE&L sec 238, abnd 1028 ft. Gentex Oil Co.'s Burch 1, 253 ft s and 440 ft e of m/w/nwc J. T. Burch sur A-1770, abnd 4364 ft. Moran & Sons' Campbell-Conoco 1, 1146 ft from n and 150 ft from w lines TE&L sec 1463, abnd 1050 ft.

SOUTH TEXAS

FIRST REPORTS

Bexar County—A. E. Henderson's Beck 1, 1170 ft ne line, 500 ft se line, 66.86-ac tr, blk 5127, M. C. Oliver sur 55, lcn.

Caldwell County—Kean & Williamson's Rector 1, 150 ft s line, 150 ft e line of 40-ac tr, in J. Roberts sur, 5 mi nw Lockhart, dr 300 ft.

Calhoun County—Continental Oil Co.'s Powderhorn 2, 2000 ft n and 1700 ft w of se cor sec 2, blk J, Juan Cano Lge, 15 mi e Seadrift, rigging.

Duval County—Blanchard et al's Lowe 1, 466 ft n line, 466 ft e line of s ½ of sur 72, 4 mi e Labbe field, spudded. Magnolia Petroleum Co.'s Weil 1, 990 ft most n'ly nw line, 990 ft most n'ly sw line CM RR sur 113, rigging.

Guadalupe County—J. E. Clark's Zoboroski 1, moving in. F. D. Spratt's Zuehl 1, west of Seguin and 1½ mi sw of Marion, dr. Weil TR. Schraffl 2, 300 ft n line, 800 ft e line, 300-ac tr, Vicente Mitchell and K. B. White sur, 3 mi s New Berlin, dr 160 ft.

Starr County—Warner & Mitchell's Chapa 1, 440 ft s line, 330 ft e line, sh 18, porc 75, J. de Camargo, dr 250 ft.

Victoria County—W. Stewart Boyle's Simon 1, 750 ft se line, 750 ft sw line of 38.75-ac lse, lot 1, blk 3, Four League gr to the town of Victoria grant, rig.

Webb County—Louis Yeager's Fee 2, 165 ft s line, 660 ft e line, sur 51, lcn.

Williamson County — Rosener & Park's Lange 1, 152 ft n line, 152 ft w line of lse in 67.5-ac tr, Hamilton White sur, lcn.

Zapata County—Nielson & Wise's Maryland 1, 200 ft n line, 200 ft w line, blk 11, sur 314, rigging up.

COMPLETIONS

Bee County—J. R. Dougherty's Hicks 6, 3275 ft w line of the Uranga gr, 3280 ft sw of sw line of O. Farrish sur, in 1120-ac tr, in Jose Maria Uranga gr, top Pettus 4222 ft, top Yegua 4402 ft, abnd 4538 ft.

Bexar County—S. K. & C. Prod. Co.'s Barker 1-A, 150 ft s line, 180 ft w line of 200-ac lse, Becerra sur, td 660 ft, pumping, pb td 541 ft, estimated 5 bbls per day.

Duval County—Standard Oil Co. of Texas' Casey 1, 990 ft n line, 990 ft e line of blk 26, sec 4, addition 3, Copita Farm and Garden tracts, Sanu Pedro de Charco Redondo gr, top Jackson 4960 ft, complete, td 6746 ft, flowed 2½ mil cu ft with spray of dist 3/16 choke, 2100 pressure, casing sealed, perforated 5334-45 ft with 20 shots.

Jim Wells County—Rowe et al's McNeill 1, 330 ft w'ly w line, 330 ft n line of tr, Agua Dulce gr, flowing small amt. dist. through separator, also flowing large amount of gas.

Nueces County—Winship & Dunn's Talley 1, 466 ft n line, 466 ft e line of sw ¼ sec 10, Paul's subd of the Driscoll Ranch, abnd 7032 ft.

Starr County—Bancroft Drilling Co.'s Guiterrez 1, 330 ft n line, 330 ft w line ne¼ of blk 15, sh 99, porc 104, top Hockley 1558 ft, abnd 2505 ft.

TEXAS PANHANDLE

COMPLETION

Wheeler County—Smith Bros. Ref. Co.'s J. K. Ribble 1, nec se H&GN sec 46, blk A-5, abnd hfw 4135 ft.

WEST CENTRAL TEXAS

Hamilton County—Wallace & Vickers' Lund 1, J. P. Bailey sur A-51, top Marble Falls lime 3221 ft, shot 230 qts nitro 3347-53 ft, tested little oil, abnd 3456 ft.

WEST TEXAS

FIRST REPORTS

Pecos County—Olson Drl. Co.-Bryce McCandless' Crockett 1, 3050 ft from e and 3200 ft from s lines T. C. sec 5, blk 110, 2½ mi s by w of Apco pool, rur Ordovician test.

Ward County—Merry Bros. & Perini, Inc.'s Bird S. Hayes 1, 330 ft from ne and nw lines H&TC sec 148, blk 44, rust Delaware test.

COMPLETIONS

Jones County—A. H. Tarver et al's A. S. Barkley 1, sw sw se sec 54, Deaf & Dumb Asylum Lands, top Palo Pinto lime 3865 ft, top Ellenberger lime 5298 ft, abnd in water 5436 ft.

Kent County—Ray Dawson et al's Haggins 1, 390 ft from n and 618 ft from w lines ne H&GN sec 118, blk 1, abnd 360 ft.

EAST TEXAS

FIRST REPORTS

Rusk County—Marietta Corp.'s E. V. Alford 1, 630 ft from w and 130 ft from n lines of Thos. Howeth sur, 1 mi s Pinehill, sur for Blossom sand test.

COMPLETIONS

Limestone County — Richards & Spriegel (was Roy Handley's) McDaniel 1, 1000 ft from w and 6100 ft from s lines of A. Bass sur, 1 mi n Prairie Hill, Austin chalk 1040-1268 ft, abnd 1739 ft.

Van Zandt County—O. W. Killam et al's Republic Insurance Co. 1, 330 ft from sw and nw lines of 61.87-ac tract, J. Saligna sur, 2 mi ne Myrtle Springs, top broken Austin chalk 3165 ft, top hard chalk 3270 ft, top Woodbine sand 4262 ft, top Red Beds 4465 ft, abnd 4626 ft.

TEXAS GULF COAST

FIRST REPORTS

Brazoria County—Humble's H. Moore 1, sw of Alvin, 785 ft fr s and 1444 ft fr e line of lease, lot 27, Hooper & Wade sur, lcn.

Fort Bend County—Link & Mayo's Foss 1, Needville area, 330 ft fr nw line and 330 ft fr ne line, H&TC 63, lcn.

Montgomery County—T. J. Wood's Fultz 1, East Montgomery area, 330 ft each way out of the nec of Fultz 50-ac tract, Wm. C. Clarkson sur, lcn. D. B. MacDaniel's Baldwin 1, Tamina area, 1098 ft fr w and 7585 ft fr n line of 1607-acre tract, Walker County School Land sur, lcn.

Newton County—N. W. Hunter's Smith 1, 466 ft w and n fr nwc HT&T No. 34, lcn.

Washington County—Sunray Oil Co.'s Lockhart 1, Chapel Hill area, 466 ft fr s line and 466 ft fr w line of 402-ac tract, G. Kuykendall sur, lcn.

Wharton County—Humble's Henry 1, Lane City area, 3494 ft se along sw line fr wc and 466 ft ne at right angles and 466 ft each way out of sc of lot 16, N. B. Williams sur, lcn.

COMPLETIONS

Harris County—Dick Schwab's Robertson 1, nw of Fairbanks field, 466 ft fr s and w lines of 160-acre tract, A. Lawson sur, abnd salt water 6597 ft.

WYOMING

FIRST REPORTS

Weston County—John Brorby's Hanson 1, nw ne nw 13-44n-63w, mim. Will dr to Muddy sands at around 2200 ft.

Shutdown exemption asked for Luling

Magnolia Petroleum Company has requested that the Luling-Branyon field in Caldwell County be exempt from all shutdown orders. At a hearing before the Texas Railroad Commission last week, engineers testified that the shutdowns are threatening premature abandonment of the field because of the increase in the amount of water produced.

Wells in the field now produce a minimum of 50 percent water, and the average is 90 percent for the field as a whole.

NOTES FOR THE Equipment Buyer and User

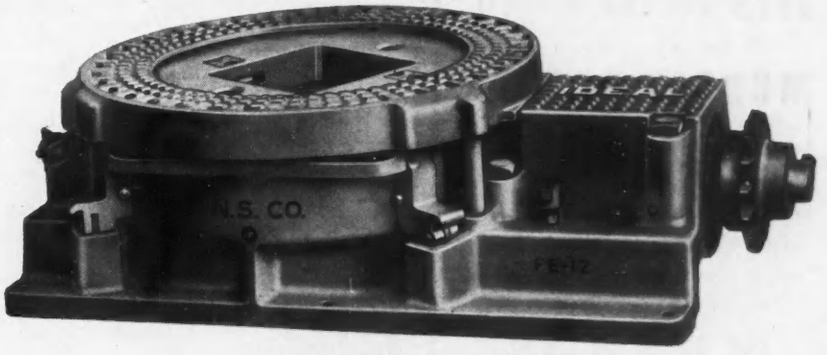
Rotary Machine

THE NATIONAL SUPPLY COMPANY

The National Supply Company now offers a new rotary machine known as the FE-12, especially designed for "slim hole" drilling and other portable work. It has a full 12-inch diameter opening, amply large enough for all bits and pipe commonly used in this type of work. It is rated for drilling to 3500 feet with 3½-inch drill pipe.

The FE-12 incorporates, the company says, many of the features of Ideal Rotary Machines. Fully enclosed, it provides a true oil-bath lubrication system for the table bearing and gears. Special attention has been given to preventing the entrance of mud into the reservoirs. The gears have a ratio of 3.05 to 1 and are spiral-cut, assuring increased strength and quiet operation. The main bearing is a proven National design and has 26 1¾-inch diameter balls. The pinion shaft has a 3¾-inch maximum diameter and is mounted on roller bearings. A 16-tooth sprocket with machine-cut teeth is regular equipment.

An outstanding improvement is the new type of rotation lock, wherein the lock pawls engage the table directly to prevent rotation instead of acting through the pinion shaft, the announcement says.



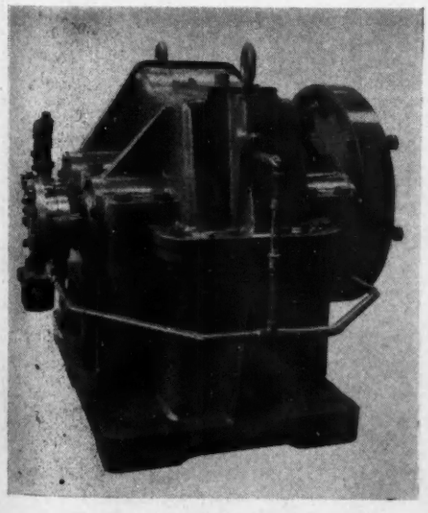
National FE-12 Rotary Machine

Speed Increasers

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY

A new line of speed increasers for operating centrifugal pumps, high-speed blowers, and compressors, and for pipeline service, has been announced by Westinghouse Electric & Manufacturing Company. Standard gear ratios vary from 2 to 1 to 12 to 1, and these new units are available in ratings of from 1 horsepower per 1000 rpm of the high-speed shaft to more than 1800 horsepower per 1000 rpm.

Speed increasers can be supplied for either right- or left-hand assembly. Sleeve bearings have been designed to provide low unit pressures and assure permanent alignment with minimum friction loss. Lubrication is accomplished by a self-contained circulating oil system, including a circulating pump, an oil cooler, strainer, relief valve, and sight flow indicator. Gears are spray-lubricated at the line of contact; all bearings are under pressure lubrication. Frames are split horizontally to permit easy access to all internal parts, and each unit has an easily removable inspection plate. Average efficiency of these units is better than 96 percent.

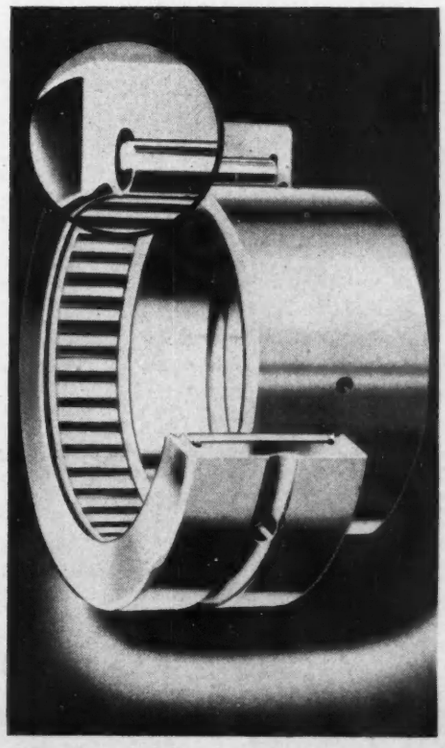


Front view of Westinghouse type SU speed increaser.

R. B. Stanbery Returns to D&B Sales Division

R. B. Stanbery has been appointed manager of sales of the D&B Mid-Continent Division of Emsco Derrick & Equipment Company. His office will be at 7626 Maple Road, Dallas, Texas.

Since 1935, Stanbery has been manager of the Subsurface Production Equipment Division of The Continen-



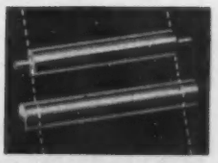
Greater Load-Carrying Capacity

Full width rounded end rollers and special outer race construction combine to give more load-carrying capacity and new efficiency in installation, performance and maintenance. The new McGILL "Solidend" *MULTIROL* Bearing is self-sealing . . . no end washers or retaining rings. For complete details, write or call:

T. W. CROSBY,
Midcontinent Representative,
909 Tulsa Loan Bldg.—Tulsa, Okla.
Telephone—2-4368

"Solidend" MULTIROL BEARINGS

The Difference is in the end construction.



McGILL MANUFACTURING CO.
1575 North Lafayette Street
VALPARAISO, INDIANA

REED

BACK PRESSURE VALVES

Manufactured by

REED ROLLER BIT CO.

Are Equipped With

MURRAY RUBBER

SEAL RINGS

Reed Roller Bit Co. is another leading oil tool manufacturer who has found that it pays to use Murray High Quality Mechanical Rubber Goods.

Our modern facilities and strict supervision of all work enable us to give the highest quality and efficient service on mechanical rubber goods and synthetic oil-resisting products.

MURRAY

RUBBER COMPANY

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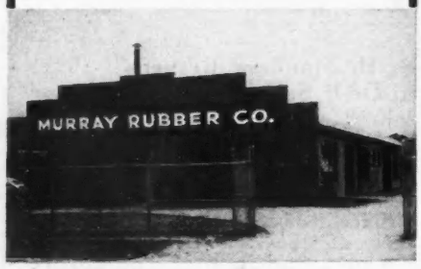
HOUSTON, TEXAS



Standco

NO-SMOKE

STANDCO BRAKE LINING

for the easiest brake known. It "feeds off" evenly. Standco never scores brake rims. See page 2100, Composite Catalog.

Standco Brake Lining Co.

HOUSTON

NOTES FOR THE Equipment Buyer and User

R. B. STANBERY

tal Supply Company, exclusive distributors of D&B products. Prior to this time, he was in charge of California and export sales for D&B in its home office in Los Angeles.

Lane-Wells Company Officials Complete Inspection Tour

Rodney S. Durkee, president of Lane-Wells Company, and M. E. Montrose, general sales manager of the organization, have just completed an inspection tour of the company's branches in the Mid-Continent and Gulf Coast areas and in the East and Canada.

Lane-Wells Company is planning to complete several new field units for gun perforating and electrologging during the coming year. Increased demand will keep the Los Angeles headquarters plant at capacity operation producing needed trucks and equipment during the coming year, it was said.

Cavins Branch Manager Transferred to Mid-Continent

The Cavins Company, Long Beach, California, announces the transfer recently of Len Moon from California to the Mid-Continent district.

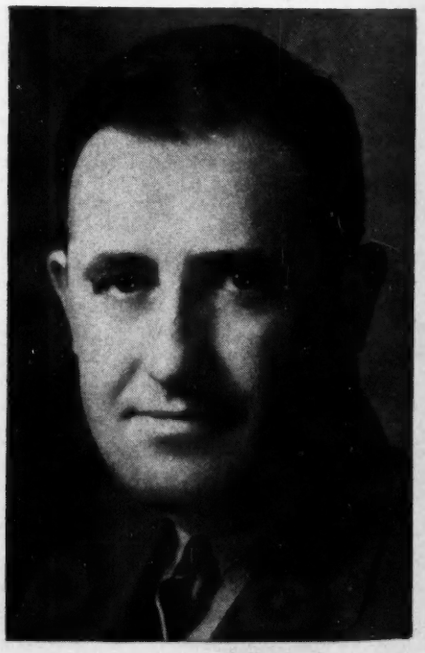
Moon has been manager of the company's branch at Taft, California, for a number of years. His new duties will be to assist the various branch managers throughout the Mid-Continent fields in whatever manner possible, serving in an advisory capacity; and to acquaint the personnel of these branches with new products added to the Cavins line of equipment which are to be introduced in the near future. For the present he will not be permanently located at any one point, but after spending several weeks with the Odessa branch, expects to apportion his time about equally between four of the company's principal branches—Houston, Corpus Christi and Odessa, Texas, and Ada, Oklahoma.

Security Engineering Company in New Quarters at Bakersfield

The Bakersfield, California, branch office and warehouse of Security Engineering Company recently occupied a newly constructed building, designed and erected by the Austin Company.

A complete stock of "Securaloy" drillable liners and well production accessories as well as Sievers reamers, reamer cutters, parts, etc., are carried in the warehouse and sufficient shop machinery has been installed to take care of the necessary field work.

Jud Williamson and Casey Jones,



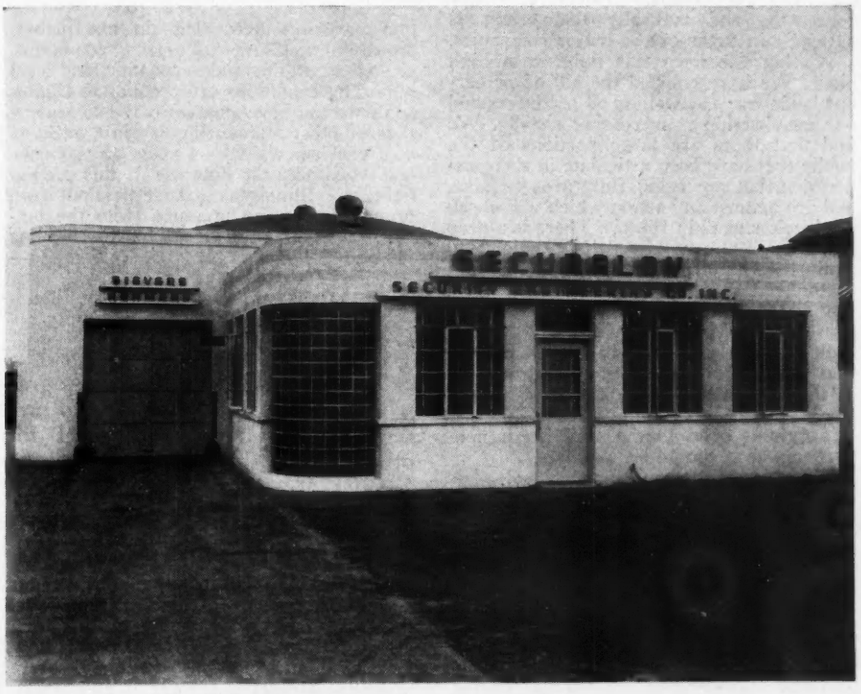
PAUL EDKIN
has been appointed Oklahoma Representative for Cameron Iron Works, Inc., Houston, Texas. He will make his headquarters in Tulsa.

W-S FORGED STEEL FITTINGS

SCREW END
SOCKET WELDING
for
HIGH TEMPERATURE
HIGH PRESSURE
OIL and GAS
SERVICE

THE WATSON-STILLMAN CO. ROSELLE, NEW JERSEY

NOTES FOR THE Equipment Buyer and User



Security Engineering Company's New Plant at Bakersfield

who have been handling the sales and service of Security products in the San Joaquin Valley, will operate out of the new branch and will be assisted by Scott Neuls, transferred from Whittier, as warehouseman. Karl Clark will continue to cover the Coalinga and Kettleman Hills fields out of Coalinga, California.

From this branch, 24-hour, 7-day-a-week service will be available to the producing fields in the San Joaquin Valley.

C. W. Ruth Heads Republic Steel Advertising Department

Republic Steel Corporation has announced appointment of Chester W. Ruth as director of advertising and of Harold H. Oldham as assistant director of advertising.

Ruth succeeds Stanley A. Knisely who recently resigned as director to become executive vice president of Associated Business Papers, Inc. Oldham succeeds Ruth as assistant director.

Ruth, who received his university education at Dakota Wesleyan University, was active in newspaper work from the time of his graduation until he became associated with a Canton advertising agency in 1920, except for more than two years during the World War; he was twice wounded while in France. In 1926 he headed the advertising department of United Alloy Steel Corporation in Canton and following the merger of United Alloy Steel with Central Alloy Steel Company he was made assistant advertising manager of the combined corporation. In 1930 with the formation of Republic Steel Corporation he was made assistant advertising manager of the corporation and in 1936 was made assistant director of advertising of the corporation and its subsidiaries.

Oldham attended grade and high schools in Dayton, Ohio, and Miami University at Oxford. Following his graduation he spent four years in retail merchandising, two years doing editorial work for a trade paper and two years of market research work. He joined Republic Steel Corporation in 1931 and has been manager of the copy and production departments since 1937.

The Continental Supply Company Opens Store at Golden Meadows

The Continental Supply Company has opened a new store at Golden Meadows, Louisiana, in charge of Raleigh Hortenstine, Jr., formerly salesman in the company's Houston office.

The new store will serve operators who are located in the fast developing section near Golden Meadows.

More Wells Being Pumped With Purchased Electric Power

A survey of new well connections using purchased electric power for pumping purposes, which elicited replies from 15 of the leading utilities companies, indicates that during the first 9 months of 1939 there were 2295 new connections made to purchase electric power.

The questionnaire, which was sent by THE OIL WEEKLY to members of the Petroleum Electric Power Association, brought responses from 15 companies. Three companies said that the trend

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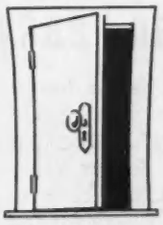
DRILLING BIT
THE INDUSTRY'S MOST ECONOMICAL DRAG TYPE BIT

with
REPLACEABLE DROP FORGED HEAT TREATED BLADES
for
LONGER LIFE
FASTER HOLE
MORE HOLE PER BIT
REED ROLLER BIT COMPANY

The Oily Log
By High Pressure

What's the new door Otis has opened that opens up more ways to economically flow your well?



Hadn't you heard? It's the SIDE-DOOR —Otis' new Type G (Side-Door) Removable Bottom Hole Choke.

The Side-Door Choke can use gas from an upper strata or surface source to produce oil from an underlying sand. It's removable and controllable, too. **The Side-Door Choke** also makes it practical to clean out and test two separate horizons in the same well—and to produce from each formation independently of the other.

WRITE OTIS TODAY
PRESSURE CONTROL
INCORPORATED
DALLAS, TEXAS

toward purchased electric power for pumping was above normal, 4 reported it to be normal in their territories and 4 reported it as being below normal. Largest increase in wells connected to such power was in the East Texas-Rodessa area.

Treatment of Emulsions

Methods of preventing and treating crude-oil emulsions are discussed in a report prepared by G. B. Shea of the Bureau of Mines, bringing up to date developments occuring since the bureau published a bulletin on the subject in 1926, it is announced by the Interior Department.

Declaring that the petroleum industry has made outstanding advancements in handling emulsified oil at minimum cost, Shea points out that this has come in recent years from a growing realization of the importance of emulsion-preventive measures leading to a more critical examination of the causes and sources of emulsions and methods of eliminating, or at least reducing, the degree of emulsification.

Discussing the various phases of the problem, the bulletin outlines methods of sampling that eliminate emulsification, thereby assuring samples that are representative of the fluid in the system which permit a determination of sources of emulsification.

Copies of the report, titled "Bureau of Mines Bulletin 417: Practices and Methods of Preventing and Treating Crude Oil Emulsions," may be obtained at 30 cents each from the Superintendent of Documents, Government Printing Office, Washington, D. C.

LETTERS—*Continued*

(See page 6)

with not only independents, but majors; one being the chief counsel of the Shell, one an attorney for the Pure Oil, and one is acting for independents, but is an attorney for the Ohio Oil Company (all three major concerns), and naturally their slant is naturally in favor of the major companies.

We hope to keep this fight on a high plane. We have enlisted the aid of numerous landowners as well as oil producers and our membership is increasing rapidly. We find that there are large portions of the public that have been articulate in their expression, but are being fully aroused now, and are against any action which will check oil developments in Illinois. There is a deep seated resentment by the landowners against the major concerns, and it is a great factor in this fight. Any legislators from the oil districts have to deal with their constituents. We are trying to keep this fight non-partisan, but it is my opinion that it can easily become a political issue in the oil districts, and oil control legislation may become a political football before this fight is over. Our association is non-partisan, as it should be.

There is a broader principle involved in this fight, which to my mind is fully as important as the question of local proration; Illinois is the last large producing oil state without oil control. If this state moves to adopt oil control legislation, it falls in line with the other oil states. Most oil control legislation results in monopolistic or semi-monopolistic conditions. The federal government is on a monopoly hunt, and if Illinois comes under oil control, the federal government can very easily state that monopolistic practices are general and can take over the industry. The machinery will have been set up and all the oil producing states can very easily use that machinery. Illinois being an independent state, free and untrammelled from any oil control can be a leader in the national fight against federal oil control.

It is perfectly possible to pass conservation measures here that do not include proration measures. Various conditions, geological, engineering, economic, and legal regarding conditions are peculiar to Illinois and must not be evaluated by the measuring rods of other states. Illinois must settle its own problem which is largely an economic one. Whatever the outcome of this present fight, the Illinoisans will settle their own problems, and the pressure from the outside, while great, will not be the deciding factor.

DORSEY HAGER,
Technical Adviser, Illinois
Oil Producers Equity
Centralia, Illinois. Ass'n.

THE OIL WEEKLY does not agree with all of this but is pleased to present reader Hager's viewpoint for others to consider.

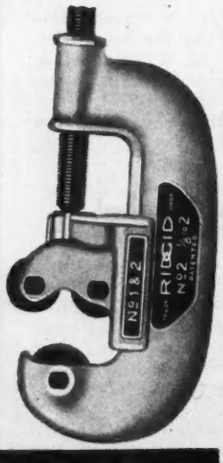
Kansas court nullifies Frog Hollow allowable

W. M. McKnab has been granted a restraining order in district court over the Kansas Corporation Commission's allowable for October for Frog Hollow, Cowley County.

Allowable set was 4672 barrels daily.

gives you *More*
quick, clean, easy pipe cuts

BECAUSE it's thin like a tough knife blade, this remarkable RIDGID cutter wheel rolls right through your pipe, leaves practically no burr. Coined from special sheet tool steel, forged and assembled in a solid hub, it assures you far more cuts per wheel — saves time, effort and money. Cutter housing is warp-proof, always cuts true, twirls easily to size. The smooth economical tool for oil service—ask your Supply House.



THE RIDGE TOOL CO., ELYRIA, OHIO

RIDGID PIPE TOOLS

Here is a NEW WORKING VALVE that *really handles sand.* It is "going over" in a big way.

The
B-M-W NU-TEX

Try one and you, too, will be pleased with its exceptional performance. It has already passed through the experimental stage and has demonstrated that it completely "out-performs" any ordinary working valve or metal plunger.

Recommended for use in Standard A.P.I. Working Barrels. Available in all sizes with either 36 rings (as shown at the left) or 48 rings.

Complete Information on Request

SOLD BY SUPPLY STORES

NU-TEX Working Valves are sold by the best supply stores, also other B-M-W Products: ● NEILSON Tools (Safety Sucker Rod Hooks, Rod Elevators, Sucker Rod Sockets, Etc.); ● ADMORE Insert Pump Anchors; ● BALLS & SEATS (made for every pumping service) including the new TOWER TYPE Ball & Seat and the 2-WAY NON-MAGNETIC Crown; ● ADMORE Liner Barrels; ● TEX TYPE Plunger Fittings and Valves; ● COLLINS Belt Clamps; ● FLUID LIFTER Pumps; and ● NU-TEX Pumps and Valves.

BRADFORD MOTOR WORKS INC.
OIL WELL SUPPLIES
BRADFORD, PA. — TULSA, OKLA.

Squeaks from the Bull Wheel

Sir!

Why do you wear such a big bustle?
Sir, I have no bustle.

Always

Don't I get any voice in our buying?
Sure, dearie, the invoice.

Advanced

"Honey, do you know the A B C's of love-making?"

"Sure, but why waste time on them? Let's get down to the X Y Z's."

On the Barrelhead

What will it cost me to fix my car?
What's the matter with it?
I don't know.
Forty-eight dollars and fifty-three cents.

Peak of Domestic Felicity

For the last time, there is absolutely nothing I want.

Lumme! Your man must be pleased with yer; you're a wife in a million.

The Lost Ball

Are you a good caddie?
Yes, sir.
A real good caddie?
Yes, sir.
Are you good at finding lost balls?
That's me forte, sir.
Well, then, go and find one so we can begin the game.

All Wet

"How did you like Venice?"

"I only stayed there a few days. The place was flooded."

Zero in Diplomacy

The teacher had asked the class to name all the states. One small urchin responded so quickly and accurately that she commended him for it.

"You did very well," she said, "much better than I could have done at your age."

"Yeah, and there wuz only thirteen states then, too."

Unmusical

Do you have any organic troubles?
No, I haven't, Doc. I couldn't carry a tune in a bag.

Not at That Price

May I have some stationery, please?
Are you a guest of the house?
Heck, no; I'm paying $10 a day.

Two Other Fellows

Didn't you have a brother in this class last year?

No, professor, it was I. I'm taking it over.

Extraordinary resemblance.

Eye for Eye

"Isn't Spot a naughty dog, mummy? He ate my doll's slipper."

"Yes, darling. He ought to be punished."

"I did punish him. I went straight to the kennel and drank his milk."

On Being Behind With One's Reading

Junior bit the meter man.
Junior kicked the cook.
Junior's antisocial now
(According to the book.)
Junior smashed the clock and lamp.
Junior hacked the tree.
(Destructive trends are treated
In Chapters II and III.)

Junior threw his milk at Mom.
Junior screamed for more.
(Note on self-assertiveness
Are found in Chapter IV.)
Junior tossed his shoes and socks
Out into the rain.
(Negation, that, and normal—
Disregard the stain.)

Junior set Dad's shirt afire,
Salted Grandpop's wine.
(That's to gain attention.
See Page 89.)
Grandpop seized a slipper and
Yanked Junior 'cross his knee.
(Grandpop hasn't read a book
Since 1893.)

Hey, That Man's In Again

"A football's a beautiful thing, isn't it?"

"Yes, and practical to boot."

Superseded

You advertise this restaurant as under new management, but the same old manager still is here.

Oh, yes, but he got married yesterday.

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WRITE FOR CATALOG 15-A

THOMAS DEVLIN MANUFACTURING CO. BURLINGTON, NEW JERSEY

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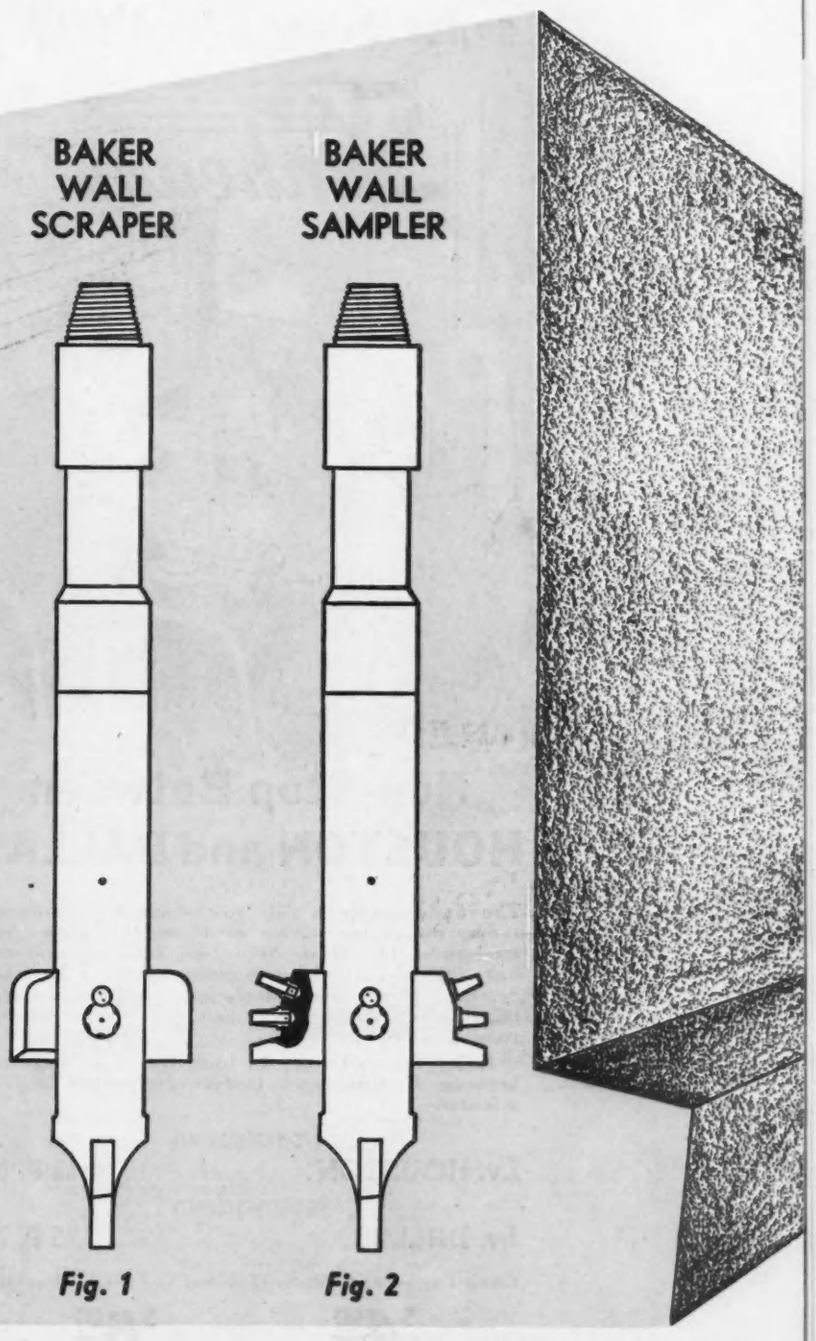

Fig. 1 *Fig. 2*

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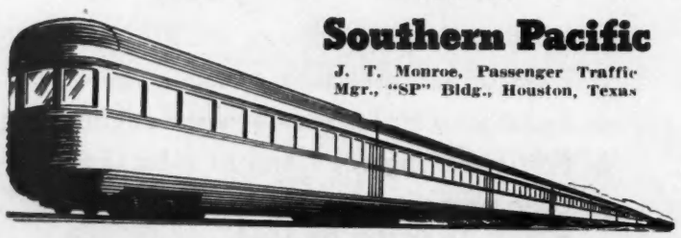

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WITH THE EDITOR

A. P. I. Review of Industry's Technical Advancement.

WITH more than 50 addresses scheduled to be delivered on an extremely wide variety of topics, the American Petroleum Institute's annual meeting in Chicago this week (November 13-17) truly will represent a cross-section symposium of thought on the industry's economic and technical advancements and problems.

That convention, the most important event of the week, will be featured in THE OIL WEEKLY of November 20.

Every effort will be exerted to provide the industry with the most complete editorial coverage possible. Seven OIL WEEKLY representatives will travel something like 15,000-man miles to be there. Those men will burn up considerable shoe leather and maul the mischief out of several typewriters in promptly, accurately and thoroughly reporting the numerous developments for you.

The November 20 issue of THE OIL WEEKLY will present an opportunity to obtain hurriedly an excellent picture of the industry's technical and economic achievements and difficulties. Separate feature articles will be prepared and published on both of these phases. Abstracts of all production and drilling engineering papers will be published and several of the most outstanding addresses will be printed in full.

The OIL WEEKLY, Published every Monday. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

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Ordinary Wire Line: "Oh-h-h, my back's about to break! I've been running in circles over sheaves and drums all day long. Oh-h-h . . ."
Macwhyte PREformed: "Buck up fella, you'll get over it. Where you working?"

Ordinary Wire Line: "What d'ya mean, a chiropractic adjustment?"
Macwhyte PREformed: "That means 'made into perfect PREformed Macwhyte Wire Line.' Once th' factory OK's us we're ready for a long life of heavy duty. Believe me, brother, I earn money for the fellow who buys me . . . I'm built to take it!"

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LETTERS TO THE EDITOR

DEAR SIR:

On page 46 of your issue of October 30 is an article dealing with oil and politics in Louisiana. The article is full of errors. I am sure that you do not want inaccuracies in your reporting; consequently I am calling the matter to your attention so that you may protect yourself against a similar occurrence.

The article states that the recent Glassell suit attacks the conservation laws and, if the laws are overthrown in such suit, the indictments against Burford et al would become void. I have before me a copy of the complaint, and, as I read it, no attack whatever is made on the validity of the conservation statutes. The suit is based primarily on the point that the Commissioner has not properly followed the statutes, and has prorated production in such a manner as to be illegal and discriminatory. Even if the court should hold that the order is void, it would not in any way be holding that the laws themselves were void.

In the article it is stated that at the hearing on the Lilly case the decision of the three-judge court

> "granted Lilly an injunction preventing the state from enforcing the proration allowable given his Eola field well."

In one sense the statement is true, and in another it is untrue. Lilly claimed that he should be permitted to produce without restriction or at least to produce as much as 200 barrels per day. The Commissioner claimed that he had been cut to 61 barrels a day because of the size and shape of his tract, and had subsequently been cut to 29 barrels a day because the Lilly well had a high gas/oil ratio. The court held that the Commissioner had not held a hearing at which the evidence showed sufficient facts to justify reducing the well from 61 barrels to 29 barrels; therefore, the Commissioner would be enjoined from interfering with the production of 61 barrels pending further hearing.

The court did not rule, as stated in the article, that discrimination was shown by virtue of the delay in getting the permit to drill. The court merely stated what was Lilly's contention in that respect. The person who wrote the article did not distinguish between the holding of the court based on evidence and the statement by the court of complainant's contention. The article states that the three-judge court upheld Lilly in his contention that he had been discriminated against in the matter of allowable. I do not so read the opinion. The court merely held that a proper hearing had not been had in which the evidence justified reduction of the allowable from 61 barrels to 29 barrels.

The article states that Lilly originally contended that the statutes were void and unconstitutional, but this phase of the case

> "was taken from the pleadings at the request of the three judges before whom the case was presented."

The judges made no such request. Lilly voluntarily stated that he concluded not to attack the validity of the statutes and wanted to withdraw from his pleadings any allegations as to validity. The court permitted such action to be taken, *but did not request it.*

In the article it is stated that in the decision in the Lilly case

> "the plaintiff was granted an injunction to prevent the state from cutting the allowable of his well below 214.9 barrels per day."

The court did not so hold. The court said the facts justified an injunction restraining the Commissioner from interfering with production of as much as 61 barrels per day.

In connection with the drilling permit the article is very much confused so that it is impossible to tell what the court held and what the court stated as being the contentions of the complainant. Indeed, the material given in the article re the permit is nothing but a statement of complainant's pleadings, and such was not the decision of the court. For instance, the court did not hold that the application for the permit was "illegally and arbitrarily" rejected. The court did not hold that discrimination was shown because of granting a permit to Feazell; and the court did not hold that the Commissioner had arbitrarily set the allowable at 61 barrels without taking into account various factors. The writer of the article was unable to distinguish between a statement of complainant's contentions and a statement of actual findings and the opinion by the court.

ROBERT E. HARDWICKE,
Hardwicke & Cheek,
Fort Worth, Texas.

Thanks to Lawyer Hardwicke for a clear-cut and accurate explanation of present muddled Louisiana lawsuits. An explanation of equally muddled Louisiana politics woudl complete the picture.

Mr. Hardwicke is active in the Lilly suit as counsel for the Amerada Petroleum Corporation - Sid Richardson interests and aided defense attorneys retained by Louisiana's Conservation Department.

Additional information on this suit will be aired at public hearing called for Eola field, November 14. In the meantime George Lilly's Haas Investment 1 is producing 80 barrels per day.

DEAR SIR:

Your issue of October 9, 1939 of THE OIL WEEKLY contained more of interest to the producer in South Texas than any magazine has carried for some time. The articles by Earl S. Post and the information compiled by him are of real value to the producers not only

Five D+B SUCKER RODS

That Cure Pumping Troubles

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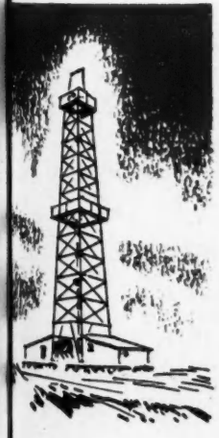
ts perfect threads
very D + B rod
nd coupling.



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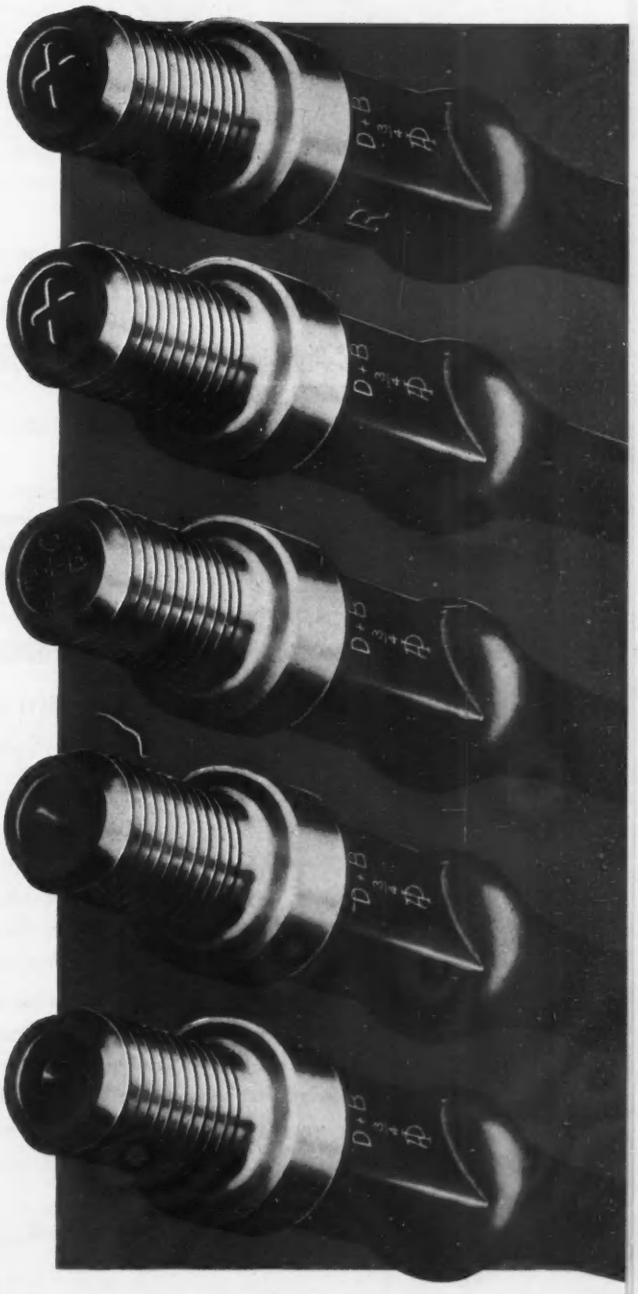

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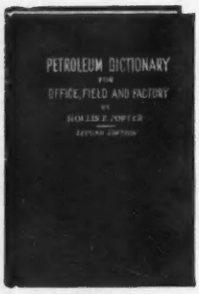

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in South Texas but as comparison information to producers in other districts and states. I hope to find more of this type of information in your magazine from time to time.

RALPH R. OGDEN,
Austin, Texas.

DEAR SIR:

I have noted with great interest the survey of South Texas presented in your edition of October 9th, and wish to compliment you on the thorough manner and great care that have been employed in the preparation of these data. Although the Sloan and Zook Company does not operate in the area under consideration, the information contained in this edition is most welcome to us, and serves as a valuable reference on many occasions. It is my hope that you can continue to give the oil industry such valuable and useful reviews.

PAUL D. TORREY,
Sloan and Zook,
Houston, Texas.

DEAR SIR:

From the time I came to Laredo in 1922 until the present, THE OIL WEEKLY has been for the oil men of South Texas the most helpful and dependable publication in my opinion; especially the Independents who have, to my mind, been unceasingly benefitted by the intelligent and unbiased treatment of all matters of practical interest to operators.

Many times I have felt like writing commendatory appreciation of various features, but I am not neglecting this time writing to say that I consider your South Texas number of October 9th a masterly digest from all vital angles.

My own experience enables me to appreciate the enormous effort involved in the exhaustive tabulation of statistical information. This complemented with the historical data and definitions by fields can not fail to be of immense value and convenience to operators particularly for the reason that it is done in a style which constitutes a ready reference compendium.

CHAS. E. WOLCOTT,
Wolcott & Rehmet,
Alice, Texas.

DEAR SIR:

I wish to take this opportunity to compliment you and your organization on the complete detail issue of THE OIL WEEKLY of October 9, 1939, which is devoted to Southwest Texas.

I have used the past Southwest Texas issues, throughout the year, for reference and I looked forward to your issue this year and needless to say, it is complete, uptodate, handy, and accurate.

REAGAN TUCKER,
Geologist and Paleontologist,
Corpus Christi, Texas.

New Zealand Faith

DEAR SIR:

I would state that the Government of New Zealand is not itself undertaking any drilling for oil but several major oil companies with considerable experience are carrying out this work.

So far as the Government is concerned it is quite confident that it can leave the matter of drilling to these companies.

P. C. WEBB,
Minister of Mines,
Dominion of New Zealand.